

County Borough



of Wolverhampton.

REPORT

UPON THE

Health of Wolverhampton

FOR THE YEAR 1906

BY

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MEDICAL OFFICER'S REPORT,

1906.

PREVALENCE AND PREVENTION OF INFECTIOUS DISEASE.

Table 2 gives the weekly numbers of cases of certain diseases certified by Medical Men under the Infectious Diseases Notification Act. The crosses represent the degree to which the disease heading those columns prevailed—these are only rough approximations. Any certificate detected as erroneous before the close of the week is not entered.

Table 1 gives the total number of cases about which enquiries were made and which were recorded; no erroneous cases are entered in this Table.

Small Pox.—No case was reported during the year.

Measles.—The severe prevalence of 1905 continued in a less degree through the first quarter of the present year; the prevalence was mainly in the North side of the borough, which had not been so much affected during the previous outbreak; the East was rather more affected than the West. The outbreak was dying out at the close of the quarter and practically ceased early in the second quarter. During the rest of the year we only heard of a few occasional cases.

Scarlet Fever.—We began recording our cases in 1884, but as we have only had notifications since 1890 (inclusive) the returns before that year are less complete than those since. The death records in my possession go back to 1870; the following are the deaths since that year, and the known cases since 1884:—

	1870.	1871.	1872.	1873.	1874.	1875.	1876.
Deaths	54	26	69	121	34	26	58
	1877.	1878.	1879.	1880.	1881.	1882.	1883.
Deaths	226	40	17	39	64	27	24

	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Deaths	37	46	5	16	17	6	13
Cases	212	244	47	168	194	124	500
	1891.	1892.	1893.	1894.	1895.	1896.	1897.
Deaths	14	3	25	55	34	21	24
Cases	419	242	623	1036	592	372	529
	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Deaths	20	6	9	10	15	14	14
Cases	359	177	242	408	549	550	477
	1905.	1906.					
Deaths	15	17					
Cases	307	523					

The fatality varies in different periods, so that the deaths bear little ratio to the cases.

The following table gives quarterly particulars as to the cases in the two Sub-districts. The deaths are those of the cases reported in each quarter, and sometimes occur later; excepting Table No. 2, they do not necessarily correspond to the deaths in the Mortality Tables, which are those registered in each quarter:—

Quarters				1st.	2nd.	3rd.	4th.	Year.
EAST	..	Total	{ Cases ..	32	53	50	91	226
			{ Deaths ..	3	..	1	2	6
	..	Hospital	{ Cases ..	32	51	43 ^a	76	202
			{ Deaths ..	3	..	1	2	6
	..	At Home	{ Cases ..	..	2	7	15	24
			{ Deaths ..	..	..	..	..	..
WEST	..	Total	{ Cases ..	34	58	78	127	297
			{ Deaths ..	1	4	1	4	10
	..	Hospital	{ Cases ..	27	47	68 ^b	98 ^c	240
			{ Deaths ..	1	2	1	4	8
	..	At Home	{ Cases ..	7	11	10	29	57
			{ Deaths ..	..	2	..	..	2

^a 2 of these cases were in the General Hospital.

^b 26 of these cases were in a Public Institution.

^c 17 " " " " " " 2 fatal.

There were 399 cases actually treated in hospital, with a mortality of 3·01 per cent.; 81 cases treated at home with a mortality of 2·47 per cent.

On account of the larger size of many of the houses in the West a greater number of cases in this Sub-district have fair facility for home isolation; hence the greater proportion of cases so treated there. The following table gives the proportion of cases kept at home in the Sub-districts since 1884. I give the total deaths registered also, because the cases were imperfectly reported before 1890. Column 'R' is the rate of the total cases per 10,000 of population.

	EAST.				WEST.			
	Total Deaths.	Cases.	R.	Cases at home	Total Deaths.	Cases.	R.	Cases at home
1884	28	140	36·1	?	9	72	18·4	?
1885	37	146	37·6	78	9	98	24·6	70
1886	2	19	4·9	4	3	28	6·9	19
1887	5	52	13·4	25	11	116	28·2	82
1888	5	53	13·5	27	12	141	33·8	56
1889	0	45	11·5	16	5	79	18·6	29
1890	5	239	61·3	61	8	261	60·6	100
1891	7	154	39·4	28	7	265	60·4	74
1892	2	76	19·4	19	1	166	37·1	50
1893	17	301	76·6	20	8	322	70·4	47
1894	39	600	152·1	53	16	496	106·1	104
1895	16	234	59·2	28	18	358	75·0	98
1896	10	155	39·1	20	11	217	44·5	55
1897	11	219	55·0	37	15	310	62·3	77
1898	5	124	31·1	12	15	235	46·2	57
1899	4	52	13·0	6	2	125	24·1	33
1900	3	93	23·1	5	6	149	28·1	51
1901	5	131	32·5	21	5	277	51·1	75
1902	7	189	46·7	13	8	360	65·0	102
1903	8	237	58·3	31	6	313	55·3	76
1904	9	186	45·8	19	5	291	50·2	65
1905	6	118	29·1	16	9	189	31·8	51
1906	6	226	55·7	24	11	297	48·8	57

The rate of the cases to the total population does not give an accurate idea of the actual prevalence, because Scarlet Fever is mainly a disease of childhood, and the proportion of children in the East population is greater than in the West; this renders the comparison of columns 'R' in above table rather more unfavourable to the East than it should be. The general conclusion pointed to by the above table is that during periods of moderate prevalence of Scarlet Fever the West Sub-district suffers considerably more than the East; but that during periods of severe or more epidemic prevalence the East rate exceeds the West, and the East excess is roughly proportionate to the severity of the prevalence. Omitting for the present 1884 and 1885, we see the West in excess until the rather severe prevalence in 1890, when the East equals the West; the next two years the East is lower, but is ahead in the severe prevalence of 1893, and far ahead in the very severe prevalence of 1894. The same thing appears throughout the table. The ordinary conditions of poverty and crowding in the East are such as would lead one to expect a greater prevalence is there; and the only evident factor that could interfere with this is the greater amount of Hospital isolation in that district; and this appears to have been very efficient in keeping the East prevalence below the West, except when such isolation failed in the face of too severe epidemic conditions, as we might reasonably expect. There may, of course, be some natural physical factor in the West causing Scarlet Fever to be normally more prevalent there; this certainly does seem to be the case in some districts; but if this were the case it ought to show more effect in epidemic periods also, and it is remarkable that in 1884 and 1885, without very severe prevalence, and with very little Hospital isolation, the East rate far exceeds the West. This would strongly suggest the Hospital isolation as the cause of the ordinary comparative immunity in the East.

The following is the summary of the apparent effects of removal and home care on the spread of the infection in the households attacked during the year. No account is taken of houses where there is no susceptible child after the first case attacked; children who have already had Scarlet Fever being counted as insusceptible:—

EAST SUB-DISTRICT.—During the year there were 100 instances in which no second case occurred after the removal to the Hospital of first

cases. In these 100 houses there remained 248 children who had not previously had Scarlet Fever.

In 14 instances secondary cases occurred without Hospital removal, there were 18 such cases; they occurred at the following intervals after the previous case was taken ill:—One day, 7 cases; 3 cases each after two and three days; 2 cases each after four and seven days; and one case after seventeen days.

In most of these Hospital removal was ultimately effected, and in ten instances where 23 susceptible children still remained there was no further recurrence.

Thus in 110 instances there was no further case after Hospital removal, though 271 children remained in these houses.

In 17 instances further cases occurred *after* Hospital removal, there were 18 such cases at the following intervals after the removal:—One day, 2 cases; 3 cases each after two and three days; 1 case each after four, five, six, and twelve days; 2 cases after thirteen days; one case each after sixteen, seventeen, twenty-three, and twenty-eight days. The case that occurred after twenty-three days had visited a house where two children were being treated at home with Scarlet Fever.

In these houses 38 children still remained unaffected, so that in all 309 children escaped infection in 127 houses after Hospital removal.

In the East, cases were isolated at home in 22 houses; in ten of these there were no other children. In 4 the other children were all sent away. In 8 there were 12 other children; in only 2 of these did other cases occur, one in each, three, and forty-eight days after the primary cases. Besides the above, in one case where there were no other children two cousins living near who visited the house, had Scarlet Fever 8 and 11 days after the isolated case was taken ill, and the case mentioned above visited the house where 2 cases were being isolated at home, and had Scarlet Fever. The case that was taken ill after 48 days interval was really a 'return' case; the house had been disinfected and the first allowed about 6 days before the second case occurred.

WEST SUB-DISTRICT.—There were 107 instances in which the first cases of Scarlet Fever were removed, and no others occurred. In these 107 houses there remained 265 susceptible children.

In 12 instances secondary cases occurred without Hospital removal; there were 15 such cases; they occurred at the following intervals after the preceding case had been taken ill:—One day, 3 cases; two days, 1 case; three days, 3 cases; six and seven days, 2 cases each; after eight, fourteen, twenty, and twenty-three days, 1 case each.

In some of these houses Hospital removal was ultimately effected. In four instances where there were susceptible children there was no further recurrence, 11 children escaping.

Thus, in 111 houses there was no recurrence after Hospital removal, 276 children escaping.

In nine houses cases occurred *after* Hospital removal, 15 cases occurring at the following intervals after the previous removal:—One day, 1 case; two days, 5 cases; three and four days, 1 case each; five and six days, 2 cases each; fourteen, seventeen, and twenty-nine days, 1 case each.

In these houses 11 children still remained unaffected; so that in all 287 children in 120 houses escaped infection after Hospital removal.

In the West, cases were treated at home in 54 houses. In 20 there were no other susceptible children. In 12 instances the other children were sent away. In 22 houses cases were treated where other susceptible children were kept at home; there were 38 such children in these houses. In only three houses fresh cases occurred, 3 children being attacked; the intervals after the first attack were:—6 days, 8 days, and 43 days. In the last case a child of sixteen was allowed to attend on the patient after five weeks illness, and contracted the fever. A gentleman who visited this house from a distance also got the fever. This record of home isolation is particularly good, and as during 1905, this is due to the number of instances in which cases were safely isolated in very large houses, with many other children. In one instance 5 children were in a 16 roomed house with 9 bedrooms; in another, the same number in a 7 roomed house; in another, 2 children in an 8 roomed house, and 2 in a 7 roomed

house ; 1 child in 11 roomed house, and 1 in 10 roomed house. In such cases home isolation ought to be easily practicable, and of course in all the cases there was reasonable facility for isolation, or the cases would have been removed. We had one 'return' case ; 23 days after the premises were disinfected a second case occurred ; this case is not taken into account, as the interval was too long for a reasonable probability of infection, and there was strong suspicion that the children's nurse had visited at a house where there was a case of Scarlet Fever.

The summary for the Borough is as follows :—Hospital removal was effected in 247 houses. After the first removals there remained in these houses 629 children. In 221 of these houses there was no recurrence after removal, 547 children escaping. In 26 houses there was recurrence, 33 children being attacked. In these twenty-six houses 49 children still escaped after final Hospital removals. Of the 33 secondary cases 11 were ill within two days of the previous removal, and probably infected before it ; 3 were more than three weeks after the removal, and probably due to independent infection. This leaves only 19 cases, possibly due to failure of Hospital removal ; or to speak more correctly, due to failure to secure complete disinfection.

Cases were treated at home with reasonable facility for isolation in 30 houses, where there were 50 children besides the primary cases. Secondary cases occurred in 5 of these houses, 5 occurring. One of these cases was ill within four days of the primary attack, and therefore probably infected before any care was taken.

The following tabular statement shows the results at a glance :—

			Hospital Removal.	Home Isolation.
Total houses	...	...	247	30
Cases recurred in	...	...	26	5
Number of children after primary cases	...	...	629	50
Number subsequently attacked	..	...	33, or 5·2%	5, or 10·0%
Number possibly due to failure	...	..	19, or 3·0%	4, or 8·0%
Number of children escaping	...	...	596, or 94·8%	45, or 90·0%

The following is the total for the thirteen years, 1894-1906 :—

			Hospital.	Home.
Total houses	...	...	2,904	376
Cases recurred in	...	...	295	129
Number of children after primary cases	...	...	7,766	721
Number of these attacked	...	...	372, or 4·8%	179, or 24·8%
Number possibly due to failure	..	...	183, or 2·4%	120, or 16·6%
Number of children escaping	...	...	7,394, or 95·2%	542, or 75·2%

The cases treated at home were, of course, in roomy houses where isolation was possible; those removed to the hospital include a great majority from small and comparatively crowded houses; thus, the evidently greater protection afforded the latter is very striking. There is, however one correction which should be made in estimating the amount of protection which hospital removal affords the children left in the houses. In some instances, after the return home of a hospital case fresh cases occur. This year we had 16 such cases. If we add these cases to our 19 failures we have 35 cases due to hospital failure out of 629 children in the year, or 5·6% compared with 8·0% in the home cases. During the past thirteen years we have had 225 of these return cases, far more than the 183 cases due to failure in the case of the first removals. Together these amount to 408 re-infections in 7,766 children, or 5·3% compared with 16·6% of the children in the case of home isolation.

Many persons are nevertheless much disappointed with the failure of Hospital isolation to stamp out, or at least more completely limit Scarlet Fever. This disappointment is due to ignorance of the causes of the failure, and of the difficulties that have to be contended with. The actual failure is of course, in the first place, to secure complete destruction of infection when a patient is removed. Practical disinfection of rooms and clothing, especially in the houses of the poor, is a very difficult thing to attain; in few cases can we hope for a perfect result; this is the first cause of failure, and considering its gravity it is really remarkable that we have so few cases recurring after removals from poor houses. The second and more potent cause of failure is the number of cases that remain undetected until they have had free scope to spread infection; this being intensified by the ignorance or gross negligence of so many of the public. We have continual examples of this, and while we have, any very great limitation of Scarlet Fever during times when it is at all epidemic in character must be quite impossible. The following are a few typical cases which occurred during the year:—A. Taken ill in school and sent home; mother sent to school again next day ailing; teacher sent home, doctor called in and found Scarlet Fever. B, being subject to sore throats no notice was taken at first, and case attended school until teacher noticed peeling, then sent home, and taken to a doctor. C, a child, was ill while away from home, kept in bed for a fortnight, thought to be German Measles; after

a total four weeks absence came home by train ; eleven days later mother and two other children had Scarlet Fever, and C was found peeling. D had a rash, supposed to be nettle rash, no doctor ; after thirteen days, during which D was attending school another child had Scarlet Fever, and D was found peeling. E was ill in school, stayed away for a week, then returned for a week, when teacher found peeling. F, similar to last, was away from school with a sore throat for a few days, returned for a fortnight before teacher noticed peeling and reported ; on Inspector inquiring mother said child had had Mumps ; doctor was called in and certified Scarlet Fever. G had a rash, was not ill nor kept from school ; 8 days later a brother had Scarlet Fever, doctor called in and certified both cases. Even without definite negligence obscure cases will at times give trouble :— All three children in a house had Scarlet Fever at intervals of 20 and 3 days, each case being promptly removed to Hospital ; then it was found that a young servant had had a sore throat six days before the first child was taken ill, and she had been, and was then peeling. A doctor saw a boy with presumably indefinite symptoms, saw him again a week later ; eleven days later the boy was taken to the doctor and found peeling ; meanwhile a child had played with him and got Scarlet Fever.

Diphtheria.—The quarterly cases of, and deaths from, Diphtheria in the borough since 1890 have been :—

		1890				1891				1892			
Cases	..	11	3	4	5	8	8	6	11	1	7	4	4
Deaths	..	3	—	—	1	1	2	1	1	—	3	1	—
		1893				1894				1895			
Cases	..	7	5	12	11	11	16	33	22	34	78	56	140
Deaths	..	—	1	1	3	5	8	10	10	19	24	14	27
		1896				1897				1898			
Cases	..	108	101	87	64	73	72	75	91	61	25	64	52
Deaths	..	19	15	9	12	11	10	11	26	19	5	11	8
		1899				1900				1901			
Cases	..	29	20	29	27	24	15	32	24	24	21	22	39
Deaths	..	5	4	5	7	3	3	4	—	2	2	3	6
		1902				1903				1904			
Cases	..	15	33	21	22	6	13	13	14	11	9	14	44
Deaths	..	3	6	3	6	2	4	1	3	2	1	3	12
		1905				1906							
Cases	..	24	15	23	24	21	16	25	34				
Deaths	..	6	1	6	5	5	5	2	11				

The annual cases and deaths in the Sub-districts have been :—

		1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
EAST	{ Cases	11	8	3	14	36	88	114	121	76	37
	{ Deaths	2	1	2	2	20	29	21	21	18	12
WEST	{ Cases	12	25	13	21	46	220	246	190	126	68
	{ Deaths	2	4	2	3	13	55	34	37	25	9
		1900.	1901.	1902.	1903.	1904.	1905.	1906.			
EAST	{ Cases	35	30	36	9	23	20	22			
	{ Deaths	4	7	12	2	7	3	7			
WEST	{ Cases	60	76	55	37	55	66	74			
	{ Deaths	6	6	6	8	11	15	16			

We have still considerable uncertainty as regards the real prevalence of Diphtheria, the diagnosis without bacteriological confirmation is necessarily doubtful, and this confirmation is frequently not sought. Still more serious is the neglect of this means of being assured that a case is free from infection, for many cases retain infection when all apparent signs of illness have ceased. We have again the remarkable excess both of cases and deaths in the West.

EAST.—During the first quarter we had only 7 cases, one fatal; 2 cases were sent to the General Hospital. In the second quarter only 3 cases were reported, and one of these was taken ill elsewhere; 2 cases were treated at the General Hospital, one fatal. In the third quarter 9 cases were reported; 5 were treated at the General Hospital, two fatal; of the 4 at home, one was fatal. One case came here already ailing from the seaside, and a cousin who was a frequent visitor also had Diphtheria; this was the only instance in which any connection was traced between two cases in the East. During the fourth quarter only 3 cases were reported, all were treated in the General Hospital, one case was fatal, dying shortly after admission. For a district like the East the above comparative immunity from Diphtheria is very remarkable.

WEST.—In the first quarter 14 cases were reported, 4 being fatal; 2 cases were sent to the General Hospital. In the second quarter there were only 13 cases reported, but 5 of these were fatal; 2 cases were sent to the General Hospital, one of these was fatal. Two cases were in one house, the only cases found associated of the above 27. In the third quarter there were 16 cases, only 1 fatal; 2 cases were in an Institution, one of these, and three other cases were sent to the General Hospital;

the fatal case was treated at home. One case had been playing with a previous one. There was quite an exceptional prevalence during the fourth quarter, when the East was almost free ; there were 31 cases, 7 fatal ; 8 were removed to the General Hospital, 3 being fatal. In three instances there were 2 cases each in a house, and in one of these there had been a previous case last quarter.

Enteric Fever.—The cases and deaths since 1890 have been—

		1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
EAST	{ Cases	22	34	22	53	27	78	89	51	76	115
	{ Deaths	6	5	6	7	10	10	24	9	13	23
WEST	{ Cases	22	64	53	83	54	56	49	45	41	79
	{ Deaths	3	11	9	16	7	8	13	12	7	21
BORO'	{ Cases	44	98	75	136	81	134	138	96	117	194
	{ Deaths	9	16	15	23	17	18	37	21	20	44
		1900	1901.	1902.	1903.	1904.	1905.	1906.			
EAST	{ Cases	106	50	49	36	19	10	23			
	{ Deaths	22	7	12	10	6	4	6			
WEST	{ Cases	80	39	44	35	23	26	24			
	{ Deaths	17	10	3	6	6	6	2			
BORO'	{ Cases	195	89	93	71	42	36	47			
	{ Death	39	17	15	16	12	10	8			

Our freedom from Enteric Fever is remarkable, but undoubtedly the return of cases is incorrect, many mild ones never being heard of.

The quarterly returns of cases were :—

EAST	..	{ Cases	..	..	8	3	6	6
		{ Fatal	..	..	1	1	2	2
WEST	..	{ Cases	..	..	7	4	8	5
		{ Fatal	..	..	—	1	—	1

The numbers of fatal cases do not necessarily tally with the deaths registered, as the deaths may occur, and therefore be registered, after the close of the quarter.

EAST.—Although the year's returns are higher than the two preceding years, they are nevertheless very moderate for a poor district ; the mortality per case is high, but the total death-rate low. Of the 8 cases in the first quarter 2 were father and child, the other 6 cases were separate. Seven cases were treated in the General Hospital, one case could not be admitted, this was the fatal case. Of the second quarter's three cases one went into the Workhouse ailing, and died there; the other two were

removed to the General Hospital. Of the six cases in the third quarter two were in one house, and were sent into the General Hospital. Of the four cases kept at home two were fatal; it is very doubtful if one of these was Enteric Fever; of the other two cases one was allowed out eleven days after being taken ill, this can hardly have been Enteric Fever. Of the six cases in the fourth quarter one was treated at home, this case was fatal; five were treated in the General Hospital, one was fatal; one of the cases was a Hospital nurse, the others were separate.

WEST.—In the first quarter, of the seven cases five were removed to the General Hospital, one was taken to the Workhouse infirmary. In the second quarter, of the four cases two were sent to the Hospital, one of the other cases was fatal. Of the third quarter's eight cases only one was taken to the Hospital. Of the fourth quarter's five cases only one was removed, one other was fatal; one case this quarter came ill from a distance. None of the year's cases were associated or explained.

Table No. 2 gives the particulars of the cases of Diphtheria and Enteric Fever removed to Hospital.

Diarrhœa.—The annual deaths returned as due to Diarrhœa since 1875 have been :—

1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
96	105	59	93	48	111	46	87	56
1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
140	50	149	105	60	84	68	105	55
1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
161	62	135	131	188	174	132	117	109
1902.	1903.	1904.	1905.	1906.				
72	86	161	126	130				

With the exception of the years 1875-6 and 1886-7 there were regular alternation of high and low returns up to 1895, when the returns were high until the years 1902 and 1903, both of which were rather low; in 1904 we had a very high return, and in the last two years a rather high return. As usual the East returns are much the heavier—76, against 54 in the West; although the populations are about as 2 to 3. Fifty-six of the East cases were under one year, 18 between one and five years; the corresponding figures in the West being 40 and 10.

This subject was dealt with rather fully in last year's report, and need not be again enlarged on ; but certain records are of use, and should be kept up, as showing the connection between the temperature and the epidemicity of diarrhœa.

Prevalence in any constantly-increasing severity commenced in the East apparently early in August (see Table No. 5). There had been some exceptional number of deaths in the West about a fortnight earlier ; the deaths were at a maximum in the week ending September 15 ; fell off rather rapidly after that date, but persisting in some degree till the end of November. Our experience has generally been that when the 4ft. ground temperature exceeded 52° and the 1ft. exceeded 60° , circumstances favoured diarrhœa ; that rain modified this, higher temperatures being apparently needed to foster the disease when there was much rain. This year the 1ft. exceeded 52° (see Table No. 4) the week ending June 23rd, and the 4ft. exceeded 60° the following week ; during the latter week there was a heavy rainfall. The following table gives the weekly Diarrhœal deaths, mean air temperature, mean 1ft. and 4ft. earth temperatures for twenty weeks.

Week ending	Deaths.	Temperature.			Week ending	Deaths.	Temperature.		
		Air degs.	1ft. degs.	4ft. degs.			Air. degs.	1ft. degs.	4ft. degs.
June 30	—	56·3	60·7	53·5	Sept. 8	20	64·2	63·9	57·6
July 7	2	58·1	60·3	53·8	„ 15	29	55·0	59·4	57·6
„ 14	—	55·8	61·8	54·7	„ 22	10	53·4	56·8	56·6
„ 21	2	59·6	62·0	55·0	„ 29	9	48·3	52·3	55·6
„ 28	2	61·8	63·5	55·6	Oct. 6	6	55·0	53·9	54·4
Aug. 4	3	63·5	63·4	56·2	„ 13	11	53·5	55·3	54·3
„ 11	4	63·0	64·7	56·8	„ 20	5	47·0	50·5	53·8
„ 18	4	53·2	61·2	57·1	„ 27	4	52·5	50·9	52·9
„ 25	11	64·2	62·9	56·7	Nov. 3	2	42·6	46·5	52·0
Sept. 1	13	65·4	63·1	57·2	„ 10	1	43·6	45·4	50·5

As the weekly deaths would about indicate the degree of prevalence of the disease a week or two earlier, the above table fairly corresponds, as regards the commencement and rise of the disease, with our usual experience. It also confirms former observations in the fact that when once firmly established the disease persisted in the presence of much lower temperatures than those apparently required for its development ; indeed the latter fact was peculiarly manifested this year, especially when we notice that there was a very heavy rainfall during the three weeks ending October 20th,

The following table gives the annual Diarrhoeal deaths since 1900, and the weekly means of the 4ft. deep earth temperature, the figures in the columns after the second give the number of weeks in each year during which this temperature exceeded the degree at the head of the column:—

	Deaths.	52 °	53 °	54 °	55 °	56 °	57 °	58 °
1900	... 177	19	17	14	12	8	4	—
1901	... 144	20	16	14	12	7	2	—
1902	... 101	16	15	12	10	—	—	—
1903	... 113	17	15	12	8	—	—	—
1904	... 188	18	15	12	11	6	1	—
1905	... 151	18	15	13	12	8	2	—
1906	... 174	18	17	14	10	8	4	—

The following gives similar figures for the 1 ft. deep earth temperature.

	Deaths.	60 °	61 °	62 °	63 °	64 °	65 °	66 °
1900	... 177	11	9	6	5	2	1	1
1901	... 144	9	8	7	5	2	—	—
1902	... 101	5	3	3	2	1	—	—
1903	... 113	7	1	1	—	—	—	—
1904	... 188	8	6	5	3	2	1	—
1905	... 151	10	6	6	4	3	2	—
1906	... 174	11	9	6	5	1	—	—

These records for the previous decade will be found in the 1903 report. The subject is more fully gone into in 1897 report.

BOROUGH HOSPITAL.

There were 25 cases of Scarlet Fever in the Borough Hospital at the close of last year; the quarterly numbers dealt with during this year have been as follows:—

Quarters.	Remain- ing in from previous Quarter.	Admitted	Total Discharg'd	Died.	Average number of days in of the cases admitted.	Average daily number of Patients in Hospital.
First ..	25	61 ^a	60	5	38.4	24
Second ..	26	105 ^b _c	108	2	42.5	50.3
Third ..	23	88 ^b	64	2	40.5	31.5
Fourth ..	47	175 ^a _d	145	4	43.2	80.4
Year ..	25	429	377	13	41.8	46.6

- (a) 1 case from the Workhouse.
 (b) 4 cases from the Tettenhall District.
 (c) 1 case from Willenhall.
 (d) 17 cases from the Tettenhall District.

We thus had 77 cases left in at the close of the year.

The summaries of the cases admitted each quarter are as follows :—

First Quarter.—Sixty-one cases were admitted, two did not have Scarlet Fever; five were fatal :—A, $2\frac{3}{4}$ years old, nephritis, uræmia, 41 days in ; B, 3 years old, very severe septic case, 13 days in ; C, 3 years old, had had Measles three weeks previously, Scarlet Fever two days, spreading cellulitis of neck, 5 days in ; D, 7 years old, very severe septic case, severe cellulitis of face and neck, 4 days in ; E, 2 years old, very severe septic case, adenitis and cellulitis of neck, 3 days in. Seven other cases were very severe, twelve severe. Complications :—Otorrhœa, 5 cases ; Rhinitis 2 cases ; Adenitis, 4 cases ; Suppuration, 1 case ; Skin Affections, 3 cases ; Onychia, 2 cases ; Nephritis, 2 cases ; Pneumonia, 1 case ; Stomatitis, 1 case.

Second Quarter.—One hundred and five cases were admitted, two of these were not Scarlet Fever ; two were fatal ; A, 5 years old, severe septic case, cellulitis of neck, double suppuration, 22 days in ; B, $3\frac{1}{2}$ years old, very severe septic case, toxæmia, 2 days in. Seven other cases were very severe, and thirteen severe. Complications :—Otorrhœa, 11 cases ; Rhinitis 8 cases ; Adenitis, 4 cases ; Suppuration, 4 cases ; Skin Affections, 7 cases, two of these were severe Psoriasis ; Onychia, 5 cases ; Stomatitis, 1 case ; Nephritis, 5 cases, four of these were very severe, three had Uræmia ; Chicken Pox, 1 case fourteen days after admission, infection contracted before, severe cellulitis and suppuration of face. Whooping Cough, 1 case on admission.

Third Quarter.—Eighty-eight cases were admitted, two were fatal :—A, 16 months old, very severe septic case, cellulitis of neck, 11 days in ; B, 4 years old, same as last case, toxæmia, 3 days in. Five other cases were very severe, and ten severe. Complications :—Otorrhœa, 2 cases ; Rhinitis, 7 cases ; Adenitis, 1 case ; Suppuration, 2 cases ; Skin Affections 5 cases ; Onychia, 1 case ; Conjunctivitis, 1 case ; Appendicitis, 1 case ; Whooping Cough, 2 cases, one severe on admission ; another only detected 18 days after admission.

Fourth Quarter.—One hundred and seventy-five cases were admitted; one did not have scarlet fever, five were fatal—A, 10 years old, very severe septic case, 5 days in; B, 3 years old, very severe septic case, double conjunctivitis, cellulitis, and suppuration of orbit and neck, 19 days in; C, 8 years old, very severe toxæmia, under 2 days in; D, 2 years and 9 months old, severe toxæmia, stomatitis, diarrhœa, 26 days in; E, $3\frac{1}{2}$ years old, very severe septic case, toxæmia, $2\frac{1}{2}$ days in. Sixteen other cases were very severe, and nineteen severe. Complications:—Otorrhœa, 9 cases; Rhinitis, 22 cases; Adenitis, 14 cases; Suppuration, 8 cases—one was a lachrymal abscess, another an abscess of the nasal septum; Skin Affections, 11 cases; Onychia, 4 cases; Rheumatism, 3 cases; Parotitis, 3 cases; Diarrhœa, 3 cases. The work of the Hospital during this quarter was exceedingly heavy. We had as many as 97 cases in at one time, so that our wards were overfull, and we had to make some selection of cases for admission,

During the year seven patients were attended by their own doctors, four doctors attending.

Fourteen of the cases admitted during the year died; eight of these were under 5 days in hospital, all hopelessly ill when admitted; one case 11 days in was an infant of 16 months, also admitted in a desperate condition. I have adhered to an early discharge of all apparently clear cases; the average stay in Hospital of all patients during the year being just under six weeks. It is seen that the average stay in of the cases admitted each quarter varies directly, as the average number of cases in the Hospital during the quarter; this is probably because with more crowding of the wards, there is greater liability to the occurrence of complications, and delay in their cure. During the first quarter, the short stay is also in part due to five deaths, four having been only in for a few days.

The following Table gives the proportion of cases without definite signs of Scarlet Fever when seen after admission, and the results:—

Quarters.	Total Admis- sions.	Indefinite when admitted.				
		Total.	Apparently not had Scarlet Fever.			
			Total.	Safely Dis- charged.	Caught Scarlet Fever,	Died.
First ..	61	7 ^a	3	2	1	..
Second ..	105	10 ^a	2	2	..	..
Third ..	88	4	..	..	..	..
Fourth ..	175	15	4	1	3	..
Year ..	429	36	9	5	4	..

^a One of these was a case of Measles.

When we consider the difficult conditions under which many of these cases are seen, in their own homes, only nine errors out of 429 cases is a very small proportion. Unfortunately four of the cases took Scarlet Fever; happily, all recovered.

Return Cases.—By these are meant cases who are supposed to be infected from a patient discharged from an Infectious Hospital. The possible sources of infection in such cases were fully dealt with in the 1903 Report. Prior to 1902 I retained our cases in hospital for a period of seven weeks from the onset of illness, regardless of the fact that many cases have finished peeling, and are free from obvious complication long before this. At the close of 1902, in accordance with the views of many eminent authorities, I began discharging cases within a few days after they appeared quite clear. The result is to reduce the average stay in the Hospital by about a week. It was hoped that the shortened stay would lessen the occurrence of infectious complications, by reducing the duration of the exposure to such, and by reducing the numbers in the Hospital. I have not, however, up to the present noticed any effect on the total of our return cases. During this year 364 patients returned to their homes from the Hospital. In 11 of these other cases occurred in their homes at the following number of days interval after the return of the

Hospital case :—124, 69, 62, 52, 48, 43, 37, 36, 36, 35, and 31. It is curious that in the instance of another case after 35 days interval the patient, who had returned from the Hospital, had himself been taken ill 72 days after the return of a previous case last year. None of the Hospital cases above had any complications, therefore it is practically impossible that so remote infections could be due to them. The following cases are less certain :—A, 39 days in Hospital, 43 days illness, no complications ; 23 days after return another case, two other children were in the house unaffected. B, 43 days in, 44 days illness, no complications ; 21 days later there was another case, and 14 days after this another ; several cases of Scarlet Fever had occurred in these children's schools. C, 25 days in (admitted late when peeling), 52 days illness, no complications in Hospital ; a couple of weeks later had a sore toe ; 20 days after return another case occurred. D, 41 days in, 45 days ill, no complications ; on the morning of and before this child's return another child was sent away, and all communication between the two was denied, 10 days later, while still away, the latter child got Scarlet Fever. In none of these cases is infection from the Hospital at all probable. E, 43 days in, 49 ill, had Psoriasis ; clear when discharged, and since ; 16 days later there was another case ; five other children in the house were unaffected. F, 42 days in, 44 ill ; no complications, obscure history of contact with two children next door, who had Scarlet Fever 17 and 20 days later ; two children in F's home were unaffected. E and F are doubtful cases of Hospital infection. G, 38 days in, 39 ill, no complications ; 20 days later there was another case, rather a late infection, but G's short detention in Hospital renders the infection less improbable. H, 38 days in, 42 ill, no complications, 16 days later, another case. I, 39 days in, 41 ill, no complications in Hospital, but since return, sore behind the ear ; 15 days later there was another case. J, 40 days in, 43 ill, no complications ; 14 days later another case occurred. The last three are possible cases of Hospital infection. K, 42 days in, 43 ill, no complications in Hospital, but since return had sore in nostril ; 12 days later another case occurred. L, 39 days in, 40 ill, no complications, 7 days later there was another case. M, 48 days in, 50 ill, delayed by sore toe, 6 days later another case, (2 other children unaffected). N, 41 days in, 42 ill, no complications in Hospital, but nose sore since return ; in 6 days another case occurred. O, 42 days in, 45 ill, no complications, another

case after 5 days. P, 38 days in, 42 ill, no complications; two other cases occurred after 5 and 11 days. Q, 42 days in, 43 ill, no complications; after 4 days 2 other cases occurred, and 15 days after these, another. P and Q were discharged on the same day, and possibly there was some defect in disinfection. R, 38 days in, 42 ill, mild, rather indefinite case, no complications, in Hospital, mother thought one ear was moist after return home; in 4 days another case, S, occurred. S, 41 days in, 44 ill, no complications in Hospital; after return, mother noticed nostril sore, three days after, there was another case. R and S were in the same family. We may fairly assume that the cases from G onwards were probably, those from K, almost certainly, cases of infection from the Hospital; that is, 13 patients of the 364 carried infection, and 16 return cases arose from these. P and Q were the only patients who caused more than one return case. This is a small percentage of failures, but it is unsatisfactory to notice so many instances in which complications, generally considered infectious, occurred after patient's return home; *e.g.*—in I, K, N, R, and S. This would seem a strong argument in favour of a longer detention in Hospital, but it is almost impossible to put a practical limit to the time when such complications may occur in some few cases, and it would be a doubtful advantage to detain all cases for a much longer period than has been done, for the sake of a few in which late complications might arise; especially as so many return cases arise independently of such complications. Of course there is always an element of doubt as to the infection being from the Hospital case, and we have frequent examples of this, as the following:—A child was 57 days in, 61 ill, detained because otorrhœa and rhinitis; a child at home had gone to school before the Hospital patient came home, was sick in school, and complained of sore throat, and was in consequence sent home; had rash next day, and proved a severe case of Scarlet Fever; had the Hospital case returned a few days sooner, we should have been convinced that this was a return case, especially as there was no other known source of infection. In drawing conclusions about the infection in any particular case, it must be remembered that probably in more than 95 per cent of our initial cases in a house, no cause can be found; therefore in attributing infection to an uncertain source, the probability of such ought to be at least nineteen to one, to logically justify a positive conclusion.

METEOROLOGY.

(See Table 4).

First Quarter.—There was very little typical winter weather, we had a continuance of the unseasonable conditions of the previous quarter. The temperature was low, but much above the average, and changes were frequent, sudden, and often very extreme. The lowest temperature was seven degrees of frost on the morning of February 10th. The mean daily temperature was only slightly below freezing point on only five days in the quarter, January 23rd, February 5th and 6th, March 13th and 26th; so that there was no continuance of severe cold. The nearest approach to this was in the week ending February 10th, when there were five rather severe night frosts. There were besides occasional severe frosts, e g., January 20th (5°), 23rd (5°), March 13th and 14th (6°), 22nd (5°).

There were hardly any actual gales, and the amount of wind was generally low. There was high wind, S.W., on January 5th, 6th, and 7th; and again on the 14th and 15th, and on the 18th, and rather high West wind on the 27th and 28th. On February 2nd and 3rd there was a N.W. gale; on the 8th there was high S.W. wind with thunder; and similar wind on the 24th. On March the 9th, 10th, and 11th, there was high West wind, changing on the 12th to a Northerly gale with snow. Up to March 18th the wind direction only occasionally varied from Westerly, but from that date to the close of the quarter it was almost persistently North East, these winds were cold, but never severe, there being a most remarkable absence of our usual harsh East winds.

The total rainfall 6.17 inches was rather low, the first week was very wet, with both snow and hail; the third week was very wet, and the ninth week was rather wet, with some snow; during the rest of the quarter there were only occasional showers, more or less heavy.

The mean humidity, 86, was high, there was but little bright weather.

We have never recorded such extreme variations in the barometer as occurred this quarter; the air pressure as a rule was rather low; but on four weeks the range was over an inch, and twice was an inch and a quarter.

Second Quarter.—There was a considerable rise in temperature with the commencement of the quarter, the first fortnight being very warm, with occasional cold nights. The next three weeks were cooler; there were frosts on April 19th, 20th and 29th (the latter 6° of frost); there was considerable hail and snow. The next three weeks were mild and damp; the last five weeks were hot, but June 1st and 2nd were cold, and June 29th was cold and windy.

There was not much total wind. There was high S.W. wind on April 21st, and N.W. on the 28th; high S.W. wind on May 5th, and S.E. on May 23rd and 24th; there was a W.S.W. gale on June 25th and 26th, and a cold N.N.E. breeze on June 29th. During the quarter the direction of the wind was largely from N.E. or S.E.

The total rain-fall, 6.62 inches, was rather above the average. The first three weeks were very dry, the next fortnight very wet (over 2 inches of rain), there was much hail and snow, a heavy snow-storm on April 26th. The sixth week was damp, with but little actual rain; there was considerable rain during the seventh week, with heavy hail on May 16th. There was very heavy rain in the eighth week (1.22 inches); and heavy rain in the ninth; on June 1st there was a thunderstorm with heavy hail and rain. The tenth week was dry, the eleventh showery. The twelfth was again wet, there was a thunderstorm with showers on June 17th, and a thunderstorm with very heavy rain on the 23rd. There was an inch of rain during the thirteenth week; excessively heavy rain on June 27th and 28th. There was an earthquake tremor on June 27th.

The mean humidity, 78, was moderate.

The barometer was exceptionally high during the first fortnight, with considerable range, on April 14th the corrected reading was 31.030 inches; from this it fell rather rapidly, and for three weeks the mean was moderately high, with an extreme range; then for four weeks it was moderately high and steady; then high and steady to the close of the quarter.

Third Quarter.—There was the most typical summer temperature we have had for years; it was very and constantly warm during July, then it

was very hot to August 11th, then a cooler week; then three weeks excessive heat. The mean weekly temperature from August 18th to September 8th was over 64° . There was intense heat from August 31st to September 2nd; the mean temperature on these days was $71^{\circ}.5$, $72^{\circ}.9$, $75^{\circ}.1$; the maximum shade temperature was $90^{\circ}.0$, $90^{\circ}.4$, $90^{\circ}.3$. The highest temperature previously recorded by us was on July 19th, 1901, $88^{\circ}.3$, which was exceeded by the three days above; but the mean temperature of July 19th, 1901, was $75^{\circ}.1$, the same as the highest this year, on September 2nd. After September 8th the temperature fell rapidly, the last week was fairly cool, the nights being cold.

There was not much wind, hardly any high wind. It was windy (N.W. changing to S.W.) on July 14th, 15th, and 16th, there was moderately high N.W. wind on the 19th. On August 3rd there was high S.W. wind; and high W. and N.W. wind on the 24th and 25th. The prevailing direction was West, but S.E. during the intense heat at the beginning of September, and N.E. and S.E. during the last cool fortnight. The total rainfall, 3.74 inches was very low. The first and third weeks were almost rainless, there were a few showers during the second and fourth, with some thunder on July 27th. During the very hot weeks, the fifth, sixth, and seventh, there were occasional heavy showers, heavy rain with thunder on August 8th. There were frequent moderate showers during the cooler week, the eighth. During the next three very hot weeks there was practically no rain except some rather heavy showers on August 24th. There were some moderate showers from September 13th to the 16th, and practically this was the only rain during that month.

The humidity, 79, was moderate, nothing like so low as the rainfall would lead one to expect; but our observatory is in a low situation and over damp clayey soil.

During the quarter the barometer was, with few exceptions, high; during the last fortnight, and especially the last week, it was very high.

Fourth Quarter.—The temperature, with some exceptions, was fairly mild; the fifth week was rather cold, so was the sixth, and the seventh was cold; there was then a mild fortnight; the tenth week was cool, the eleventh was very cold; the twelfth week was much milder, but still cool;

the last week was intensely cold ; the mean temperature for the week being over two degrees below freezing point.

The total amount of wind was probably high, there were frequent high winds, but very little storm. The 27th and 28th October were windy, (Westerly). There was high wind on November 6th (N.E.), and a gale on the 8th and 9th (N.N.E.) ; there was a very high S.W. wind on November 15th, 16th, and 17th ; and again on the 19th and 20th ; and S.S.W. on the 23rd. On the 26th, 29th, and 30th there was rather high N.W. wind, and the same on December 2nd and 3rd. There was a high S.W. wind on December 24th.

The total rainfall, 8·63 inches, was heavy. There were frequent heavy showers during the first three weeks, with a slight thunderstorm on October 10th. There was some fog in the second week. There were some showers and fog in the fifth week, the sixth was again very wet, with some fog. The next fortnight was moderately wet ; the ninth week dry, but with some fog. The twelfth week was very dry ; there was considerable snow in the thirteenth.

The humidity, 90, was very high.

During the first four weeks the barometer was high and fairly steady ; during the fifth week it was steady and very low ; during the sixth low, but with greater variations ; during the next four weeks it was high, but the variations at times were extreme and rapid. In the eleventh week it was rather low and steadier ; the twelfth high and very steady ; during the last week it was rather low, with a range of over an inch.

VITAL STATISTICS.

The death rate in England and Wales for the year 1906 was 15·4 ; this was 0·2 above the rate for 1905, and 1·4 below the average for the previous ten years. The death rate for the 76 towns whose populations exceeded 50,000 at the 1901 census, was 15·9 for 1906 ; for the four preceding years, 1902-5, it was 17·4, 16·3, 17·2, and 15·7 ; the death rate of Wolverhampton for 1906 was 14·8, and for the four preceding years it was 16·2, 15·2, 14·6, and 14·8 ; our position in these towns being very

good ; this year we are twenty-sixth, 50 towns having a higher death-rate. Our comparison with other towns is more particularly given in Table No. 11, and in order to keep down the size of the Table, and to more easily compare with former records, this table only includes those formerly known as the 33 greater towns. In this Table, No. 11, the figures are taken from the Registrar General's Annual Summary, and the general death rates are corrected for the varying sex and age distribution in the towns, this affords a fairer comparison than if the ordinary rates were taken. The average corrected death rates for the 33 towns in 1904 1905, and 1906, have been 18·99, 16·98, and 17·59; our corrected death rates for those years were:— 16·0, 15·51, and 15·31; our position in these towns is most satisfactory. But still more satisfactory is the comparison of our present with our past position amongst the 33 towns.

For the nine years preceding 1901 our position in the 33 great towns, and the *excess* of our death rate over their total death rate has been:—

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Position ..	25th	24th	29th	26th	24th	26th	27th	26th	27th
Death-rate excess	0·19	1·03	2·07	3·18	0·43	2·42	1·68	0·99	2·44

That is, during this nine years, on an average, 25 of the towns had a lower rate than ours, and only 7 had higher, and our rate was 1·6 higher than the total rate of the towns. During the five following years our position and the *excess of their death-rate over ours* has been—

	1901	1902	1903	1904	1905	1906
Position ..	8th	8th	11th	3rd	6th	6th
Death-rate excess	1·89	1·20	1·17	2·99	1·47	2·28

This year we have the same death-rate as Portsmouth, the five towns in front of us are Croydon, Brighton, Bristol, Leicester and Cardiff; being the same as last year. As regards the details of deaths given in Table No. 11:—We had exceptional freedom from Measles, but so had most of the country; eleven of the towns had a lower death rate. Scarlet Fever deaths are slightly above the average, only eight of the towns have a heavier death rate; but nearly all of them deal with this disease; our death rate from it is really low. So is our death rate from

Diphtheria, but the general prevalence has been low, only ten towns have a heavier death rate. Our Whooping Cough death rate is very low, only nine towns are lower; this disease is almost uncontrolled. Our Enteric Fever death rate is very low, but eleven of the towns are lower. Diarrhæa is a considerable index of general cleanliness in a town, and I regret to note our rather heavy death rate, only fourteen of the towns have a heavier, but some of these are very much heavier. In spite of our heavy diarrhœa rate, our infant death rate, which is largely due to diarrhœa, is not a very bad one, only eight of the towns are lower.

Many of these towns are much better circumstanced than we are, as a rule they have in proportion much larger sanitary staffs than we have, and their expenditure on health work is far heavier than ours; so the position we occupy is a very gratifying one; but it is not so striking as the comparison with our past. As a matter of fact the death rates of many of the towns had a remarkable fall after 1900, and our improved position has been gained in spite of this, our actual improvement is seen from Table No. 9. The figure in the column numbered 6, the infant death rate, and 13, the general death rate, are so remarkable in their maintained improvement, that any comment on them is superfluous. The death rate 14·6 in 1904 is slightly too low, owing to an error in the return of Borough Residents dying in the Workhouse (in col. 11). Taking this into account the improvement is continually progressive to last year's 14·8, and is maintained in 1906.

Some amount of this improvement is due to the falling birth rate, (col. 4), and this is unsatisfactory. It hardly comes within the scope of this Report, but the continuous and serious drop in the birth rate is a matter of grave concern. Low as our birth rate has fallen, we see in Table No. 11, that sixteen of the towns have lower, some very much lower rates. The five towns with lower death rates than ours, have all lower birth rates as well.

Table No. 8 gives for ten years some detailed death returns; in spite of an increasing population, nearly all detailed causes of death compare favourably with the ten years' average; the only notable exception is that

of deaths over 65 years of age, this probably means that a greater number reach that age than formerly, and is therefore rather a good sign than otherwise. The best items are the low returns from respiratory diseases and from Phthisis; and the low deaths of infants and young children.

The most instructive of our statistics are those which are not so gratifying; as usual, these are those which refer to the comparison of our two sub-districts. In Table No. 10 we see the yearly changes; since the great drop, in 1901, followed by a lesser drop the next year, the West death-rate has been, with slight variations, a really low one, lower than any of the thirty-three towns. There was a relatively greater drop in the East in 1901, no drop in 1900, a further considerable drop in 1903, last year there was a further drop, this year it is a shade higher than in 1903; only eight of the thirty-three towns have a higher death-rate. The infant rate in the East fell considerably (34) in 1901, and in the following there was a nearly equal drop; it has been almost stationary since; this year's rate (166) is a high one; the same rate in the West fell greatly (55) in 1901, there was a further drop the next year, and with the exception of 1904 it has kept moderate since, this year's being only 118. Since the drop in 1903 the mean death-rate in the East has been 17·3, in the West 13·0. The birth-rate and child population are relatively greater in the East; the birth-rate has fallen regularly in both sub-districts, the relative fall being rather greater in the West. Table No. 6 gives the quarterly details during the year. The difference in the East and West populations must be remembered in comparing figures. Owing to rather severe weather during the first quarter Respiratory deaths were moderately heavy, and Measles would increase these in the East, hence an enormous East death-rate, with heavy child deaths. In the West a moderately high rate (9·7 below the East) and heavy deaths among the aged. With milder weather and practical absence of zymotics, the second quarter's rate was low (12·5); in the West it was down to 10·6, in the East it was 15·0; respiratory deaths and infant deaths were mainly responsible for this. The main factor in the third quarter was Diarrhoea, far more fatal in the East, especially in infants and in young children; in the West the former suffered heavily, the latter not so much. The fourth quarter is remarkable for a much nearer equality of East and West, due, in the main, to heavier respiratory deaths in the West.

SANITARY CONDITION OF, AND SANITARY WORK DONE IN, THE BOROUGH.

Beyond that most important of all our work, the routine abatement of nuisances, nothing particular has been done during the year. The regular work has been well kept up, in spite of some hindrance from the investigations in connection with infectious diseases. I have already pointed out the evident connection between the remarkable improvement in the death-rate and the bringing of our inspection work to a thoroughly organised system; it would be superfluous to repeat this, but the connection should not be lost sight of. Our improved health conditions are mainly due to the thorough carrying out of ordinary nuisance abatement work, with all its apparent trivialities, and often apparently vexatious requirements.

Our main defects on a large scale still remain, the pail closets, and many ash-pits. The latter are steadily but slowly being done away with, but the problem of the pail closets is a more serious one. As soon as we have an increased water supply, steps must be taken to get rid of the pail closets and substitute water carriage.

One matter which I regard with considerable concern is the introduction into our streets of large steel mains carrying power gas under high pressure. This gas contains a high proportion of carbonic oxide, a deadly poison; when air is habitually breathed containing only a very small proportion of carbonic oxide, the result is most gravely detrimental to health. It is easy to see how much might occur through an overlooked accident, such as the corrosion of a main, and steel corrodes readily; and serious injury might be done to health, long before the subtle cause could be detected.

This year an attempt was made to combat one cause of ill-health, misuse of alcohol; posters were issued, as had been already done in other towns, giving some simple facts and plain advice.

Workshops.—The work in connection with these is being carried on, as will be seen by reference to the Tables appended to Mr. Peers' report.

House Closure.—I have only recommended four houses for closure. There are, of course, still very many houses not really fit for healthy habitation, most because they are pent up in courts, and have not sufficient light and air; some because they are damp, or otherwise structurally defective. The latter must soon be closed, I have only refrained because of the fact that those still remaining are in very open situations. Those remaining in the courts are more difficult to deal with, because they are all fairly well-built, and in good condition; and the vital importance of air and light is yet so little appreciated that the closure of these houses appears a needless hardship.

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- „ 2.—Cases of Infectious Disease recorded during the year, and the proportion treated in Hospital (the equivalent of Table III, L.G.B.)
- „ 3.—Week Returns under the Infectious Diseases Notification Act, and prevalence of some other diseases.
- „ 4.—Weekly Meteorological Returns and Death Rate.
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County Borough



of Wolverhampton.

REPORT

OF THE

CHIEF SANITARY INSPECTOR

(JOHN PEERS, R.P., A.R. San. I.)

UPON THE

WORK OF THE INSPECTION DEPARTMENT

For the Year 1906.

PRINTED BY ORDER OF THE HEALTH COMMITTEE

REPORT OF THE CHIEF SANITARY INSPECTOR

For the Year 1906.

HEALTH OFFICES,
TOWN HALL,
WOLVERHAMPTON,
March, 1907.

To the Chairman and Members of the Health Committee.

Mr. Chairman and Gentlemen,

I have the honour of presenting the Report upon the work accomplished by your Inspectorial and Clerical staffs during the year 1906. This is the eighth successive Annual Report I have submitted in connection with the work of this Department.

With the exception of a Special Report in April, relative to the lighting of Courts, no very special features arise this year, either as regards the staff, (which has now remained the same for the past three years), or in connection with the particular work devolving upon us; consequently the Report takes the same form and style as heretofore, thus lending itself to ready comparisons being made with our past records.

Tables A, B and C show at a glance the result of each individual Inspector's effort in connection with what constitutes his ordinary routine work. The figures of each Table are below those of last year, and in some cases it will be found they are considerably below the previous five years' average. It would seem therefore that the remarks made under this heading in the 1904 and 1905 Reports serve, in a large measure, to explain how many of the discrepancies may occur. It is clear that during the past three or four years changes have taken place which materially affect this special work, and the more we improve in this direction the more difficult it becomes to maintain previous Standards.

One of the most striking items is in connection with our "Unwholesome Food Records." (See Table D). Our work in this direction has more than doubled during the past five years. This year the figures show an increase of 30·9 % over those of 1905, and 79·8 % over the average for five years past. This somewhat remarkable result has been rendered possible by the very large amount of material now voluntarily surrendered. No less than 330 separate entries have been made in the register this year; only 15 of which refer to seizures.

I attach a copy of the Statutory Report to the Local Government Board, dealing with our work under the Canal Boats Acts; and there is also a brief summary of the several reports of your Veterinary Inspector.

GENERAL SANITARY WORK.

COMPARISONS AND COMMENTS.

COMPLAINTS.

(Table A.)

641 written complaints have been received, alleging the existence of sanitary defects, as against 617 during 1905, and an average of 557 for the previous five years, increase 11 %.

This year's figures are the highest ever recorded in this connection, and go to support the statements made in our previous reports, viz., that year by year the public interest increases in regard to sanitary circumstances in general.

The complaints received relative to closet pails have numbered 101, as against 96 during 1905, and an average of 271 for the previous five years. These complaints invariably allege neglect or accident, and taking into consideration the fact that there are over 11,000 pails in use within the Borough, it is not too much to say that those responsible at the cleansing

department deserve much credit in limiting the possibilities in this direction. The decrease this year as compared with the average is no less than 62 %.

The "requests" as distinguished from complaints proper, received this year number 758 ; being far below the average which totals to 1233.

INSPECTIONS.

(Table A).

38,143 inspections, re-inspections, or "calls made", have been recorded by the five Sub-Inspectors. The corresponding number in 1905 was 44,124, and the average for the previous five years was 42,034. There is, therefore, an appreciable reduction this year; in fact the total is the lowest yet recorded, and each district Inspector shares in the fall. The Workshops Inspector shows a slight increase in the number of the inspections he has made.

Compared with the average figures of the past five years (1901-05), each sub-district Inspector's returns show a decrease to the following extent :—

N.W. 18·2 %, S.W. 17·8 %, N.E. 10·1 %, S.E. 27·6 %.

In pointing out the reductions in these returns, it is only fair to say that the Inspector's time appears to have been more than usually occupied in connection with infectious diseases enquiries, proper, which show an increase of 43 % over those of last year's. This would greatly interfere with the ordinary routine work of Inspection, &c.

Houses Inspected.—2,088 inspections of dwelling houses have been made by the four Sub-district Inspectors. This is a reduction of 17% as compared with the number in 1905, but shows a slight increase (3%) above the previous five years' average.

Re-inspections, calls made &c.—13,702 is the total number returned under this heading by the several Inspectors (9,368 by the Sub-district men, and 4334 in regard to workshops). This total is 13% less than that for 1905, and 34% below the average number for the five years 1901-5. The returns under this heading are subject to much variation, depending upon the nature of the special work arising from time to time ; the details in connection with which were fully outlined in the 1904 report.

Bakehouses.—794 visits of inspection have been made to the Borough bakehouses, which number about 115 in occupation. The visits this year are 4% less than that for 1905, but are still 8·7% above the average. Taken on the whole these premises are fairly well kept. A few are ‘Models,’ but the majority of the structures are of a very old character, and difficulties arise in connection with the necessary cleansing of the tops or ceilings in a few instances.

Cowhouses.—The cowhouses within the borough numbered 21 at the end of the year, and 188 visits have been paid to them by the Sub-district Inspectors. This return compares very favourably with our past records in this behalf; it does not include the special inspections made by your veterinary Inspector. (See separate Summary).

With one or two exceptions these premises are well kept, and certainly receive far more attention than many of the so-called ‘country’ cowhouses in the surrounding districts.

Dairies and Milkshops.—922 visits have been paid to the various dairies and milkshops, as compared with 1,116 during 1905, and an average of 870 during the 5 years 1901-5. The number of these premises within the Borough vary considerably from time to time, the average being between 250 and 300. Several applications for Registration have been made in respect of premises which upon inspection have been found unsuitable for the storage of milk for sale, and in such cases we have, of course, refused Registration in consequence.

Slaughter Houses.—No less than 3,456 visits have been made to the various slaughter houses (45 private, and 1 public) within the borough. These figures are slightly below those of 1905, but are far in excess (35%) of the average for the previous 5 years. These premises generally are well kept, though in some cases difficulty of inspection arises owing to the distances of the slaughterhouses from the actual business premises concerned. This work makes far greater demand on the Inspector’s time than was the case a few years ago, and the amount of butchers’ meat dealt with has increased to a remarkable extent during recent years. This fact has however already been referred to.

During the year transfers of existing licenses were granted in five cases. No new licenses have been granted since the year 1900. All existing licenses (except one) were renewed for the usual period on the occasion of the annual renewals being applied for in November, and in accordance with the instructions of the Committee several of the licensees (and in a few cases the owners also) were written concerning the unsuitability of the premises, &c.

Offensive Trades.—The few offensive businesses proper within the Borough are systematically visited, and the premises invariably found satisfactory, having regard to the nature of the particular trade. In April application was made for the necessary sanction to be given to permit the establishment of a particularly offensive business, but the Committee refused to make the needful recommendation to the Council. Subsequently the occupier of these premises had to be specially written to by the Town Clerk.

Food Inspection.—3,297 visits of inspection have been recorded in connection with the various premises where ‘food-stuffs’ are prepared or retailed. Table D goes to show the large amount of work involved in this direction. From the figures given in Table A it is clear that the East Sub-districts receive special attention in this direction, nearly three-fourths of the total visits being recorded by the East Inspectors. It should perhaps be pointed out that the fact that the Markets are situate in the East Sub-district have a bearing on the result.

The systematic Saturday evening Market inspection still continues. 18 Justices’ orders of condemnation have been rendered necessary this year, as compared with 8 in 1905. Three prosecutions ensued in connection with seizures of diseased butchers’ meat. (See Table E).

Miscellaneous.—636 Inspections, the character of which are too varied to schedule have been recorded. These have reference mostly to special cases, and include observations made in connection with alleged smoke nuisances. Visits of inspection made by the Medical Officer of Health are entered under this heading and houses unfit for habitation are thus dealt with. This year only four such houses have been closed, as compared with an average of 44·2 during the previous 5 years.

SANITARY DEFECTS REPORTED AND DEALT WITH.

(Table B.)

4,903 Sanitary defects have been reported upon by the several sub-inspectors, as compared with 5,291 in 1905, and 5,424 the average for the five years 1901-5. The figures for the S.W. Sub-district are exactly the same as those recorded during last year. The returns of the other Inspectors show a slight decrease. In the ordinary course of events it is only reasonable to expect that the commoner types of sanitary defects are becoming more scarce, consequently our records in this behalf are likely to show reduced results, and viewed from this standpoint the figures may be taken as fairly satisfactory

NOTICES ISSUED.

(Table B.)

2,343 intimation (preliminary) Notices, and 898 duly authorised Statutory Notices have been issued by the Dept. in dealing with the above named sanitary defects. These figures are by far the lowest recorded in any previous year. Last year the figures were 2,607 and 1,123, and the averages for the five previous years have been 2,984 and 1,260 respectively. This year's therefore, as compared with the five years' average figures, is 21·5% and 28·7% decrease respectively.

During the year 664 intimations and 108 Statutory Notices were issued against occupiers, or 28·3% and 12% of the total Notices issued, and in nearly all these cases the matters dealt with have reference to the keeping of fowl, &c., in improper situations; foul surfaces, and walls, and accumulations, and choked W.W.C. and drain inlets. Twelve prosecutions ensued under the provisions of the Public Health Acts in connection with non-compliance with Notices, and one under the Midwives' Act. (See Table E.)

IMPROVEMENTS.

(Table C.)

Broadly speaking it is not too much to say that the returns shown in this Table are the best evidence of the results of each individual Inspector's efforts in connection with routine work.

The figures taken as whole represent an enormous amount of work done.

5,813 Improvements, and 4,036 premises improved is by no means a poor record, but it is nevertheless behind that of 1905, as well as being below the five years average; the actual decreases being 16·2 % and 9·9 % respectively, compared with the average figures for the previous five years. On referring to the latter averages in my possession I find the number of drainage re-constructions this year shows a decrease of 53 %.

The number of drains improved or repaired show a decrease of 18 %.

„ „ drain traps fixed „ „ 30 %.

It is therefore clear there has been much less drainage work executed under the Inspectors supervision this year as compared with previous years.

The returns this year in regard to the provision of ash-bins in lieu of ash-pits show a considerable reduction, as does the figures in connection with the paving of courts, yards, or channels.

On the other hand there is a slight increase in the number of houses cleansed or limewashed; and in connection with the figures dealing with the provision of “spouting,” etc., there has been an increase of 38 %.

Each individual Inspector’s figures show a considerable reduction this year, but the greatest difference appears to be in the N.E. and S.E. sub-districts. It must however be borne in mind that these two Inspectors have to devote much time to Markets and Food Inspection generally.

It is gratifying to find that this is the first year since 1898, that we have no occasion to close any polluted drinking water wells.

WORKSHOPS.

The Medical Officer of Health having been provided with a special Table by the Local Government Board, at the request of the Secretary of State, with a view to securing uniformity in the Reports relating to Factories and Workshops, &c., the following Table is submitted, with the particulars desired, as far as we are able to supply them from the records of our Workshops diary, registers, weekly returns, &c.:—

1.—INSPECTIONS.

Premises	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	126	—	—
Workshops („ Workshop „)	4260	226	—
Workplaces	70	—	—
Homeworkers' Premises	4456	226	—
Total			

2.—DEFECTS FOUND.

Particulars.	Number of defects.			Prosecu- tions.
	Found.	Remed- ied.	Referred to H.M. Insp'ctr.	
NUISANCES UNDER THE PUBLIC HEALTH ACTS—				
Want of cleanliness	112	130	—	—
Want of ventilation	27	12	—	—
Overcrowding	3	3	—	—
Want of drainage of floors	—	—	—	—
Other Nuisances	323	304	—	—
*Sanitary Accommodation { insufficient	2	2	—	2
{ unsuitable, or defect- ive	5	5	—	—
{ not separate for sexes	3	3	—	—
OFFENCES UNDER THE FACTORY AND WORKSHOPS ACTS—				
Illegal Occupation of Underground Bakehouses (s. 101)	—	—	—	—
Breach of special sanitary require- ments for Bakehouses (s. 97—100)	—	—	—	—
†Failure as regards lists of outworkers (s. 107)	—	—	—	—
Giving out work to be done in premises } unwholesome (s. 108)	—	—	—	—
which are } infected (s. 110)	—	—	—	—
Allowing wearing apparel to be made in premises infected by Scarlet fever or small pox (s. 109)	—	—	—	—
Other offences	—	140	—	—
Total	475	599	—	2

*Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the Council.

† Circulars are invariably necessary before these lists are supplied to us.

3.—OTHER MATTERS.

Class.	Number.
MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—	
Failure to affix Abstract of Factory and Workshop Act ...	16
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts.	<div> <div>Notified by H.M. Inspectors...</div> <div>Reports (of action taken) sent to H.M. Inspectors ...</div> </div>
Others ...	—
Underground Bakehouses (s. 101) :—	
Certificates granted during the year ...	—
In use at the end of the year ...	1

Homework :	Number of	
List of Outworkers (s. 107) :—	Lists	Out-workers
Lists received	82	286
Addresses of Outworkers	<div> <div>(Forwarded to other Authorities</div> <div>(Received from other Authorities</div> </div>	
	17	10
Homework in unwholesome or infected premises :—	Wearing Apparel.	Other.
Notices prohibiting homework in unwholesome premises (s. 108)	1	—
Cases of infectious diseases notified in homeworkers' premises	—	—
Orders prohibiting homework in infected premises (s. 110)	—	—
Workshops on the Register (s. 131) at the end of the year ..	1200	
Important classes of workshops, such as workshop Bakehouses, may be enumerated here	<div> <div>Majority of Bakehouses in Borough are “workshop Bakehouses.” ..</div> </div>	
	110	
Total number of Workshops on Registers ..	1310	

CANAL BOATS.

Copy of the Report submitted to the Local Government Board (as required by Section III. Canal Boats Act, 1884) showing the work executed by us under the Provisions of the Canal Boats Acts.

CANAL BOATS ACTS, 1877—1884.

BOROUGH OF WOLVERHAMPTON REPORT FOR
THE YEAR 1906.

1. The duties of Canal Boat Inspection in this Borough devolve upon the Chief Sanitary Inspector (John Peers, Health Offices, Town Hall, Wolverhampton), and his assistants.

NO SEPARATE REMUNERATION IS SPECIFIED FOR THIS WORK.

2. 257 Boats have been inspected during the year (as compared with an average of 259 during the previous five years). Of this number, 53 or 20·6% were found to be contravening the Acts or Regulations in one or more respects, (the actual number of infringements were 74,) as compared with 30·5% during 1905. This is a very satisfactory feature this year, and more particularly so when read in conjunction with the figures given below, under 'infringements' discovered, where it is shown that the commonest contravention found, only totalled 18 or 7% of the boats inspected. Overcrowding and ventilation infringements were found to the extent of only 3·1%. The occupants of the said 257 boats met with comprised a total of 825 persons, giving an average number of persons per boat equal to 3·21. Of this number, 531 were adult persons, and 294 children; and of the former, 349 were males, and 182 females; while of the latter, 155 were boys, and 139 girls. Generally speaking the cabins are kept fairly clean by the occupiers, and as a rule they give reasonable facility for the necessary inspection. Only in one instance during the year has any unpleasantness arisen with the occupant of a boat, they are usually civil in their manner towards the Inspectors.

3. Infringements discovered and dealt with :—

(a)	Registration	...	...	...	0
(b)	Notification of change of Master	...	...	...	0
(c)	Certificates	...	...	...	9
(d)	Marking	...	...	...	4
(e)	Overcrowding	...	...	...	8
(f)	Separation of the Sexes	...	...	...	3
(g)	Cleanliness	...	...	...	5
(h)	Ventilation	...	...	...	8
(i)	Painting	...	...	...	7
(j)	Provision of Water Cask	...	...	...	18
(k)	Removal of bilge water	...	...	...	0
(l)	Notification of infectious disease	...	...	...	0
(m)	Admittance of Inspector	...	...	...	0
(n)	Cabins leaking or out of repair	...	...	...	11
(o)	No pump on board	...	...	...	1
Total					74

4. No legal proceedings have been taken during 1906.
5. All infringements have been dealt with by means of the usual complaint note, or notices, and in a few instances special letters have followed where undue delay has ensued in returning the certificate of compliance.

6. Two cases of infectious disease have been notified from canal boats passing through the Borough during the year; these were:—September 7th, Membranous Croup from boat “Ivy,” registered at Uxbridge, No. 298; October 13th, Enteric Fever from boat “Madras,” registered at Chester, No. 326. In each case the patients were forthwith removed to Hospital.
7. As soon as possible after the removal of an infectious person from a canal boat, the cabin or cabins are disinfected by our officer.
8. 942 boats have been entered on the Register since 1878.
9. 14 boats have been registered or re-registered during 1906; two of these were new boats, and the remaining 12 had changed ownership. The registration of 14 boats has been cancelled during the year, 13 of which were re-registered here, and one re-registered at Stoke.

JOHN PEERS,

Chief Sanitary Inspector, and Examining
Officer under the Canal Boats Acts.

SUMMARY OF VETERINARY INSPECTOR'S REPORTS.

The number of Cows inspected during the year ending December 31st, 1906, was 1,074, as compared with 954 in 1905; increase 13·6%

Cases of Udder affections (Tuberculous)	..	2
“ “ “ (Non-Tuberculous)	..	8
“ “ General Tuberculosis	..	22

Special Remarks.—Although the number of cows inspected this year exceed the previous year by 130, yet the percentage of udder affections continues very low, a factor resulting from frequent inspection of dairies, and also from owners devoting more time and attention to methods of feeding, sanitation of premises, and grooming the animals. The number of cows affected with general Tuberculosis is larger than in previous years, but many of these animals are only slightly affected, and presented no udder symptoms, and on my advice were removed before any dangerous developments occurred.

From statistics of other large towns, the condition of the cows in the Borough compare very favourably.

Signed, J. E. CARTWRIGHT, M.R.C.V.S.

TABLE A.

Public Complaints or Requests received and dealt with.

Complaints in respect of :—Alleged or Suspected Sanitary Defects	..	641
" Closet Pans or Ash Receptacles	..	101
Requests	..	758
	TOTAL	.. 1500

Summary of Routine Inspection Work.

	DISTRICTS.				Work-shops.	Total for Borough
	N.W.	S.W.	N.E.	S.E.		
Investigations made into Notifiable Infectious Diseases	209	202	121	157	..	689
Investigations made into other Infectious Diseases	236	211	435	204	..	1086
Number of Houses inspected	433	636	697	322	..	2088
Re-inspection, Calls made, &c.	4108	1737	1701	1822	4334	13702
Inspections of, or visits paid to, Bakehouses	158	389	115	132	..	794
" Cowhouses	80	74	22	12	..	188
" Dairies and Milkshops	399	159	234	130	..	922
" Slaughter-houses	510	493	1068	1385	..	3456
" Stables and Stable Yards.. .. .	415	514	90	104	..	1123
" Courts, Outdoor Closets, Drains, &c.	1680	3351	1668	1029	..	7728
" Workshops	4	10	12	14	136	199
" Piggeries, Fowls, and other Animals kept	455	538	571	65	..	1629
" Meat and Food	331	507	1232	1227	..	3297
Ashpits reported for Clearing	72	33	40	96	..	241
Dangerous Buildings, Street Gullies, &c., reported	59	50	89	31	15	244
Waste of Water	28	8	25	39	21	121
Miscellaneous	23	11	313	204	*108	636
TOTAL INSPECTIONS, &c... .. .	9200	8923	8433	6973	4614	38,143

* Includes Canal Boats inspected by this Inspector.

TABLE B.
Sanitary Defects Reported.

Sanitary Defects.	DISTRICTS.				* Workshops.	Total for Borough
	N.W.	S.W.	N.E.	S.E.		
*1. The house or part of the house in a dirty condition	73	40	106	82	132	433
2. „ „ „ „ damp condition	117	53	223	114	9	516
3. „ „ „ „ dilapidated condition or without sufficient light or ventilation	17	6	17	22	27	89
4. The house or part of the house being overcrowded	6	13	9	13	3	44
5. The water closet or waste water closet being foul or offensive ..	38	74	21	46	13	192
6. „ „ being without a water supply, or with a defective flush of water	7	1	4	6	5	23
7. „ „ being improperly constructed	6	—	—	4	6	16
8. „ „ or waste-water closet being stopped or partially stopped	33	73	21	35	5	167
9. Urinal being improperly constructed or improperly drained	2	2	1	1	2	8
10. Closet accommodation being insufficient or unsuitable	2	4	2	5	9	22
11. The pail closet being improperly situated ..	6	5	10	19	4	44
12. The privy, midden, or cesspit being a nuisance	1	—	—	—	5	6
13. The soil pipe defective	9	1	1	3	2	16
14. „ „ unventilated or ill-ventilated	8	1	—	2	2	13
15. The bath or lavatory being improperly drained	5	2	2	13	1	23
16. The sink being improperly constructed or drained	30	12	45	37	7	131
17. The premises being improperly drained or being insufficiently drained	16	4	24	44	3	91
18. The drain inlet untrapped or improperly trapped	34	2	2	17	8	63
19. The drain or drain inlet being foul ..	45	78	60	60	12	255
20. „ being stopped	40	72	60	60	13	245
21. The drainage being defective	63	17	19	12	8	119
22. The drain being unventilated or ill-ventilated	11	3	3	5	1	23
23. The rain-water pipe being in direct communication with drain	3	2	1	5	1	12
24. The rain-water pipe being defective or stopped	55	34	93	71	18	271
25. The guttering being defective or eaves being without guttering	93	23	176	58	15	365
26. The roof of house being defective	16	14	39	36	23	128
27. The soft-water cistern being foul	8	5	6	—	—	19
28. The floor of house, or yard, or court, or closet being in an insanitary condition for want of proper paving	21	12	8	22	11	74
29. The walls or floors of outbuildings, (yard, court, washhouse or closet) being foul ..	69	55	171	79	17	391
30. The outbuildings being dilapidated ..	24	19	37	21	7	108
31. The ash receptacle being defective or foul ..	101	26	30	47	7	211
32. The premises being without proper or sufficient ash accommodation	58	23	26	40	7	154
33. The premises being without a proper manure receptacle	11	9	—	6	4	30
34. An animal or animals kept	24	19	26	34	12	115
35. An accumulation of offensive matter ..	37	28	28	20	12	125
36. The urinal being foul or offensive	14	6	1	2	2	25
Miscellaneous	80	43	109	53	51	336
TOTALS	1183	781	1381	1094	464	4903

* Under Workshops Column read “ Workshop ” where “ house ” occurs in the schedule.

TABLE C.

Notices served dealing with the aforesaid Sanitary Defects

Form of Notice.	DISTRICTS.				Work-shops.	Total for Borough
	N.W.	S.W.	N.E.	S.E.		
Intimation (Preliminary)	578	484	602	504	175	2343
Statutory	220	100	308	219	51	898
TOTALS ..	798	584	910	723	226	3241

Improvements made in Compliance with Notices served.

	DISTRICTS.				* Work-shops.	Total for Borough
	N.W.	S.W.	N.E.	S.E.		
Drains { Reconstructed	32	17	35	18	13	115
Drains { Improved or Repaired	120	130	124	75	44	493
Drains { Traps fixed	219	83	100	87	60	549
Cesspools Abolished	—	—	—	1	—	1
Privy Middens Ditto	1	—	1	1	1	4
Privies { Waste Water Closets	1	8	—	2	1	12
Altered to { Water Closets	6	2	13	12	18	51
Water Closets { Constructed	12	11	7	7	36	73
Water Closets { Improved or Repaired	107	85	19	47	9	267
Ashpits { Ash Bins provided	142	64	41	118	15	380
Ashpits { Altered to Bin	45	31	13	42	5	136
Ashpits { Improved or Repaired	14	12	—	1	—	27
Courts, Yards, and Channels { Relaid or Repaved	91	62	78	25	3	259
Water { Wells Closed	—	—	—	—	—	—
Water { Water laid on	2	—	2	14	1	19
Water { Soft Water Cisterns Cleansed	13	14	10	—	12	49
*House { Cleansed or Limewashed	83	76	88	72	101	420
*House { Generally Repaired	47	93	92	43	24	299
*House { Lighted or Ventilated	1	7	26	3	12	49
*House { Spouting, etc., provided to	172	101	257	103	22	655
Overcrowding Abated	6	14	12	11	3	46
Out-door Premises Limewashed or Repaired	173	209	435	66	38	921
Animals Removed	20	25	38	30	12	125
Offensive Accumulations Removed	51	115	81	26	29	302
Other Amendments or Nuisances Abated	199	11	161	50	140	561
TOTAL IMPROVEMENTS	1557	1170	1633	854	599	5813
TOTAL PREMISES IMPROVED	1030	847	1111	648	400	4036

* Under Workshops Column read "Workshop" where "house" occurs in the schedule.

TABLE D.
Unwholesome Food Destroyed.

			Beasts.	Calves.	Sheep.	Lambs.	Pigs.	Totals.
Carcases	{ Diseased	...	6	—	2	—	7	} 24
	{ Unsound	...	—	1	3	4	1	
Internal Organs	{ Diseased	...	49	4	46	—	94	} 211
	{ Unsound	...	6	9	3	—	—	
TOTALS			61	14	54	4	102	235

Numerous sundry pieces of Beef, Mutton, Veal, and Pork, bruised and unsound.

Several sundry pieces of immature Veal.

Several boxes Pork Loins, unsound.

6	„	Beasts Livers	„	} Foreign.
3	„	Sheeps Kidneys	„	
Several	„	„ Hearts	„	
1	„	Lambs Plucks	„	
17	„	Pigs Kidneys	„	

Several Pigs Heads, diseased.

Large quantity Rabbits (Foreign) unsound.

„ number „ Livers (English) diseased.

Several quantities of unsound Fish, (Herrings, Haddock, Hake, Kippers, Fish Roes, Mussels, Periwinkles.)

Several quantities of unsound Fruit, (Pears, Apples, Gooseberries Tomatoes.)

Eighteen Justices' Orders have been necessary in connection with the
destruction of those of the above articles that were “seized.”

			Tons.	Cwts.	Qrs.	lbs.
Approximate weight surrendered						
(voluntarily)	...	...	3	10	3	16
Do. (after inspection)	...	...	1	12	0	26
Approximate weight seized		...		13	2	0
TOTAL			5	16	2	14

Disinfection.

Number	of	houses	disinfected	...	...	...	...	369
„		Schools	„	...	...	...	...	1
„		Canal Boat Cabins	„	...	...	...	...	2
„		Articles disinfected in Steam Disinfector	...	...	...	...	...	7791
„		„ „ by Sulphurous Fumes	...	...	...	...	...	587

TABLE E.
Prosecutions.

PREMISES.	NATURE OF OFFENCE.		RESULT.
153, to 158, Coleman Street ...	Non-compliance with Notice		Order made, Defendant paying costs 10/6.
11, to 12, Tremont Street ...	Ditto	ditto	Summons withdrawn, work done, Defendant paying costs 4/6
45, Charles Street ...	Ditto	ditto	Ditto ditto
Ct. 4, Lr. Horseley Fields ...	Ditto	ditto	Ditto ditto
132 Walsall Street...	Ditto	ditto	Ditto (Work in hand)
60, Bilston Street (rear of) ...	Being in possession Diseased Meat for sale		Dismissed with costs.
114, Salop Street ...	Ditto	ditto	Defendant fined £5, and costs £5 7s.
Ditto ...	Ditto of two diseased Sheep		Dismissed.
22, Derry Street ...	Contravening the provisions of the Midwives Act, 1901		Defendant fined £1, and costs £1 15s. 6d.
Ct. 4, Lr. Horseley Fields ...	Non-compliance with Notice.		Summons withdrawn, work done; Defendant paying costs, 4/6.
12½, Cleveland St. ...	Ditto	ditto	Ditto ditto
61, Sweetman St. ...	Ditto	ditto	Order made prohibiting a recurrence of the nuisance. Defendant to pay costs, 10/6.
32, Salop Street ...	Ditto	ditto	Ditto ditto
Workshop, Fern Rd.	Ditto	ditto	Summons withdrawn on payment of costs, 4/6. Work carried out.
10. to 12, Park St., & 13, to 17, York St.	Ditto	ditto	Order made for work to be done in 21 days, and to pay costs, 10/6.
252, to 259, Great Brickkiln St., and Cottage at rear, and 23 to 27 Cherry St.	Ditto	ditto	Summons withdrawn on payment of costs, 18/-; work done.

TABLE No. I.

Cases of Infectious Diseases recorded in 1906.

	EAST SUB-DISTRICT. POPULATION 40,597.					WEST SUB-DISTRICT. POPULATION 60,903.					BOROUGH. POPULATION 100,867.					TOTALS.			RATE PER 10,000 OF POPULATION.		
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	East Sub-District	West Sub-District	Borough	East Sub-District	West Sub-District	Borough
Small Pox .. { Under 5 years { 5 years and upwards	11 21	12 41	11 39	20 71	54 172	6 28	18 40	6 72	27 100	57 240	17 49	30 81	17 111	47 171	111 412	226	297	523	55.7	48.8	51.9
Scarlet Fever .. { Under 5 years { 5 years and upwards	3 4	1 2	3 6	1 2	8 14	3 11	3 10	2 14	7 24	15 59	6 15	4 12	5 20	8 26	23 73	22	74	96	5.4	12.2	9.5
Diphtheria .. { Under 5 years { 5 years and upwards	3 4	1 2	3 6	1 2	8 14	3 11	3 10	2 14	7 24	15 59	6 15	4 12	5 20	8 26	23 73	22	74	96	5.4	12.2	9.5
Enteric Fever .. { Under 5 years { 5 years and upwards	8 8	.. 3	2 4	.. 6	2 21	.. 7	.. 4	.. 8	1 4	1 23	.. 15	.. 7	2 12	1 10	3 44	23	24	47	5.7	3.9	4.7



TABLE No. 2, (TABLE III, L.G.B.)

Cases of Infectious Disease Recorded during the Year 1906 and the Proportion treated in Hospital.

	DISEASE.	CASES RECORDED.							CASES TREATED IN HOSPITAL.					
		At all Ages.	At Ages—Years.						At Ages—Years.					
			0—	1—	5—	15—	25—	65—	0—	1—	5—	15—	25—	65—
EAST SUB-DISTRICT.	Scarlet Fever {Cases..... Deaths.....	226 6	1 ..	53 4	156 2	11	5	..	202 6	49 4	138 2	9	5	..
	Diphtheria {Cases..... Deaths.....	22 6	1 1	7 4	9 1	3	2	..	12 4	5 3	3	3	..	..
	Enteric Fever {Cases..... Deaths.....	23 6	.. ..	2 1	7 1	7	7	..	17 2	.. ..	6 1	7	4 1	..
WEST SUB-DISTRICT.	Scarlet Fever {Cases..... Deaths.....	297 10	.. ..	57 5	216 5	15	9	..	240 8	45 4	177 4	15	3	..
	Diphtheria {Cases..... Deaths.....	74 15	.. ..	15 6	49 9	5	5	..	18 6	4 3	12 3	2	..	..
	Enteric Fever {Cases..... Deaths.....	24 2	.. ..	1 ..	6 ..	5	12	..	10 ..	.. ..	4 ..	2	4	..
BOROUGH	Scarlet Fever {Cases..... Deaths.....	523 16	1 ..	110 9	372 7	26	14	..	442 14	94 8	315 6	24	8	..
	Diphtheria..... {Cases..... Deaths.....	96 21	1 1	22 10	58 10	8	7	..	30 10	9 6	15 3	5	..	..
	Enteric Fever {Cases..... Deaths.....	47 8	.. ..	3 1	13 1	12	19	..	27 2	.. ..	10 1	9	8 1	..

Diphtheria includes “Membranous Croup,” and Enteric Fever includes “Continued Fever.”

397 of the Scarlet Fever Hospital cases were treated in the Borough Isolation Hospital, two cases were treated in the General Hospital, and 43 in the Royal Orphanage.

29 of the Diphtheria hospital cases were treated in the General Hospital. 25 of the Enteric Fever hospital cases were treated in the General Hospital, and two in the Workhouse.

Of the General Hospital cases, 11 East and 15 West Diphtherias, and 13 East and 9 West Enteric Fevers were treated on the order of the Health Committee.



TABLE No. 3.

WEEKLY RETURNS under the Infectious Diseases Notification Act,
and prevalence of certain other Diseases.

A few cases x.

Prevalent xx.

Very prevalent xxx.

1906.		Small Pox.	Scarlet Fever.	Diphtheria	Enteric Fever.	Puerperal Fever.	Measles.	Whooping Cough.	Pneumonia	Influenza.
Week ending.										
January	6th..	..	7	2	..	..	xx	x	xx	xx
"	13th..	..	6	2	..	..	xxx	x	x	x
"	20th..	..	3	1	..	..	xx	x	xx	xx
"	27th..	..	3	..	1	..	xxx	x	xx	xxx
February	3rd..	..	7	..	..	1	xx	xx	xx	xxx
"	10th..	..	3	..	..	1	xxx	x	xx	xxx
"	17th..	..	4	2	4	..	xxx	xx	xx	xxx
"	24th..	..	10	2	5	..	xxx	xx	xx	xxx
March	3rd..	..	2	1	2	..	xx	xx	xxx	xxx
"	10th..	..	1	..	1	..	xx	x	xxx	xxx
"	17th..	..	5	6	..	..	xxx	xx	xx	xx
"	24th..	..	3	1	1	..	xxx	xx	xx	xx
"	31st..	..	16	3	1	..	xxx	xx	xx	xx
April	7th..	..	24	1	1	..	xxx	xx	xx	xx
"	14th..	..	12	1	1	..	xxx	xx	xx	xx
"	21st..	..	14	4	1	..	xx	xx	xx	xx
"	28th..	..	12	..	1	1	xx	xx	x	x
May	5th..	..	6	1	..	..	xx	xx	x	x
"	12th..	..	12	1	..	..	xx	xx	x	x
"	19th..	..	7	..	..	..	xx	xx	x	x
"	26th..	..	8	..	..	..	x	xx	x	x
June	2nd..	..	4	2	..	1	x	xx	x	x
"	9th..	..	4	..	..	..	x	xx	x	x
"	16th..	..	3	2	1	..	x	x	xx	x
"	23rd..	..	2	2	2	1	x	x	xx	..
"	30th..	..	6	3	2	1	x	x	x	..
July	7th..	..	2	2	2	..	x	xx	x	..
"	14th..	..	11	..	..	..	x	x	x	..
"	21st..	..	7	2	2	..	x	x	x	..
"	28th..	..	8	..	..	2	x	x	x	..
August	4th..	..	15	5	1	1	x	x	x	x
"	11th..	..	6	1	2	1	x	x	x	x
"	18th..	..	4	2	1	..	x	x	x	x
"	25th..	..	4	1	1	..	x	x	x	x
September	1st..	..	6	1	..	..	x	x	x	x
"	8th..	..	13	3	1	..	x	x	x	x
"	15th..	..	12	4	3	..	x	x	x	x
"	22nd..	..	28	1	..	..	x	x	x	x
"	29th..	..	16	4	1	..	x	x	x	x
October	6th..	..	28	7	..	..	x	x	xx	xx
"	13th..	..	17	..	4	..	x	x	x	xxx
"	20th..	..	22	..	..	2	x	x	x	xxx
"	27th..	..	21	..	..	..	x	x	x	xxx
November	3rd..	..	25	7	1	..	x	x	x	xxx
"	10th..	..	13	..	1	..	x	x	xx	xx
"	17th..	..	6	..	..	..	x	x	x	x
"	24th..	..	19	3	..	..	x	x	x	x
December	1st..	..	22	2	1	..	x	x	x	xx
"	8th..	..	19	2	..	..	x	x	xx	xxx
"	15th..	..	10	4	1	..	x	x	xxx	xxx
"	22nd..	..	14	8	1	..	x	x	xxx	xxx
"	29th..	..	5	1	2	..	x	xx	xxx	xxx
YEAR	..	..	537	97	49	12				

Tables 1 and 2 do not tally: 1 including a few cases not reported by Doctors,
and 2 including some cases which ultimately proved incorrect.



TABLE No. 4.

Weekly Meteorological Report, from observations taken at 9 a.m. daily.

Week ending.	BAROMETER REDUCED TO 32° AND SEA LEVEL.		Humidity.	TEMPERATURE.					Rain.	WIND.	Death Rate per 1,000 per annum.
	Mean.	Range		Max.	Min.	Mean.	Earth.					Prevailing Directions.
							1 ft.	4 ft.			
1906	in.	in.	0-100	0	0	0	0	0	in.		
January 6th	29.726	1.055	94	48.9	28.9	39.1	39.7	44.0	1.54	SE, SW	17.6
" 13th	29.797	.940	88	48.3	34.5	40.9	40.1	43.8	.62	SW	14.0
" 20th	29.953	1.202	87	47.3	26.9	40.0	39.2	43.6	.89	SW	11.4
" 27th	30.270	.875	88	53.1	26.8	39.3	38.6	43.2	.26	NE, SW	15.0
February 3rd	30.140	.656	86	51.5	30.4	41.3	41.6	43.2	.19	WSW, NW	17.1
" 10th	29.990	1.256	*	47.8	25.0	35.3	37.4	43.1	.41	NW, SW, NW	18.6
" 17th	29.486	.782	88	45.6	30.0	36.4	37.5	42.3	.42	NW	21.2
" 24th	29.912	.590	84	44.6	28.3	36.4	37.8	42.0	.30	NW, SE	18.6
March 3rd	29.707	1.240	92	52.1	27.9	38.7	38.8	41.8	.70	NW	16.0
" 10th	30.091	.523	84	62.2	33.5	44.9	41.6	42.2	.27	SW	18.1
" 17th	29.776	.613	85	60.1	25.7	41.2	41.3	42.9	.45	SW	20.7
" 24th	30.140	.498	77	49.8	26.4	37.7	42.4	43.2	.06	NE	16.6
" 31st	30.100	.584	75	49.4	25.1	36.2	40.5	43.0	.06	NE	17.6
April 7th	30.328	.694	71	69.7	33.6	45.7	42.9	42.8	..	NE, SE	18.6
" 14th	30.391	.634	71	69.1	33.2	48.9	46.3	43.7	.15	NE, SW	11.9
" 21st	30.127	1.197	66	63.3	28.0	43.5	47.2	45.0	.13	NE, SW	7.8
" 28th	29.858	.651	76	54.2	26.2	40.3	46.2	45.6	1.01	NE, SW	15.0
May 5th	29.713	.844	80	55.7	29.8	42.2	44.4	45.4	1.02	SW	11.4
" 12th	29.921	.457	89	66.0	40.9	52.1	51.1	45.9	.21	SW, SE	11.4
" 19th	29.785	.576	76	68.4	36.0	47.1	52.0	47.4	.39	NE, NW	10.9
" 26th	29.880	.288	83	62.8	39.9	47.5	50.4	47.7	1.22	SE, SW	15.0
June 2nd	29.875	.520	80	69.0	44.6	54.5	55.2	48.4	.59	SW, NW	15.5
" 9th	30.286	.220	75	69.3	43.0	54.5	57.1	50.0	..	SE, NE	13.4
" 16th	30.187	.300	86	74.0	45.0	54.7	59.2	51.4	.35	NE	15.5
" 23rd	30.191	.346	78	76.0	46.0	60.2	59.9	52.2	.55	NE, NW	7.8
" 30th	29.991	.134	81	70.0	43.2	56.3	60.7	53.5	1.00	NW, NE	7.8
July 7th	30.075	.290	79	76.6	43.4	58.1	60.3	53.8	.02	NW	14.0
" 14th	30.170	.313	79	74.8	45.0	55.8	61.8	54.7	.31	NW	8.8
" 21st	29.934	.216	76	75.7	48.9	59.6	62.0	55.0	.05	NW, SW	13.4
" 28th	29.986	.304	78	78.2	46.5	61.8	63.5	55.6	.33	SW	13.0
August 4th	29.919	.354	76	78.3	52.7	63.5	63.4	56.2	.40	SW	11.9
" 11th	30.002	.453	77	79.9	54.1	63.0	64.7	56.8	.57	SW, NW	15.0
" 18th	29.765	.430	87	71.0	50.6	58.2	61.2	57.1	.48	SW	16.0
" 25th	29.992	.537	81	83.0	46.0	64.2	62.9	56.7	.40	W	16.0
Septem. 1st	30.202	.368	74	90.4	49.2	65.4	63.1	57.2	..	SW, SE	13.4
" 8th	30.068	.224	78	90.3	45.7	64.2	63.9	57.6	.01	NW	19.1
" 15th	30.066	.773	76	68.7	43.5	55.0	59.4	57.6	.80	SW	26.4
" 22nd	30.204	.557	79	63.1	42.9	53.4	56.8	56.6	.37	NE	15.0
" 29th	30.536	.259	86	64.8	33.3	48.3	52.3	55.6	..	NE, SE	16.6
October 6th	29.917	.581	90	67.0	40.6	55.0	53.9	54.4	1.21	SE, SW	17.6
" 13th	29.748	.229	92	61.8	43.9	53.5	55.3	54.3	1.03	SW, SE	17.6
" 20th	29.800	.317	84	60.0	31.5	47.0	50.5	53.8	1.15	SW, NW	10.9
" 27th	30.069	.593	86	65.3	34.3	52.5	50.9	52.9	.18	SW	18.1
Novem. 3rd	29.452	.385	93	52.0	34.2	42.6	46.5	52.0	.58	NW, NE	11.4
" 10th	29.682	.939	93	55.0	32.7	43.6	45.4	50.5	1.30	NE	14.0
" 17th	30.154	1.217	88	51.6	29.8	39.6	43.8	49.5	.56	NE, SW	13.0
" 24th	29.814	1.380	92	60.0	30.9	46.3	43.8	48.2	.72	SSW	11.4
Decem. 1st	30.197	.682	86	55.7	36.7	45.9	46.2	48.2	.10	NW	8.3
" 8th	30.016	.841	92	53.5	28.8	42.0	43.4	48.2	.57	NW	17.1
" 15th	29.743	.642	91	43.6	25.4	35.2	38.0	46.9	.77	NW, SW	10.9
" 22nd	30.451	.497	93	50.7	30.8	41.4	41.5	45.5	.04	SW, NE	16.6
" 29th	29.771	1.177	*	43.7	19.6	29.7	36.3	45.1	.42	NW, NE	19.1

* Frozen. Total Rainfall in the year 25.16 inches.

TABLE No. 5.—Weekly Returns of Deaths in the Sub-Districts.

		Week ending	January.	February.	March.	April.	May.	June.	July.	August.	Septem.	October.	Novem.	Decem.	1906.
			6 13 20 27	3 10 17 24	3 10 17 24 31	7 14 21 28	5 12 19 26	2 9 16 23 30	7 14 21 28	4 11 18 25	1 8 15 22 29	6 13 20 27	3 10 17 24	1 8 15 22 29	Totals
EAST SUB-DISTRICT.	MEASLES	{ Under 5 years 5 & upwards	3 2 1 3	1 1 4 1	1 1 1 2	1 1				1					24
	SCARLET FEVER	{ Under 5 years 5 & upwards		1	1 1						1	1	1		4 2
	WHOOPING COUGH	{ Under 5 years 5 & upwards		1 1		2 1 1		1 2	1 1						11 1
	DIPHTHERIA	{ Under 5 years 5 & upwards			1		1			1	1	1 1		1	6 1
	ENTERIC FEVER	{ Under 5 years 5 & upwards			1			1	1			1		1	1 5
	DIARRHOEAL DISEASES	{ Under 5 years 5 & upwards	1 1	1 3 1 1	1 1 1 1	1 1 1 1	1 1	1 1	2	1 3 4 9	8 7 14 6	4 3 7 4 1 1	2 1 1	1 1	94 7
	PHTHISIS	{ Under 5 years 5 & upwards	1 1 1 1	1 1 1 1	1 1 1 1	2 2 2 2	1 3 2 1 1			2 1 1	2 1 2	2 1 2	1 2 1	2 1 1 1	43
	RESPIRATORY DISEASES	{ Under 5 years 5 & upwards	2 1 4 3	1 1 1 2	6 1 1 4	3 1 3 3	1 3 2 2 1	2 1 3 1 4	1 1 2 1	2 1 1 1	1 1 1 1	1 2 1 2	2 2 1 2	1 2 1 1 1	50 76
WEST SUB-DISTRICT.	MEASLES	{ Under 5 years 5 & upwards	1	1	1		1								4
	SCARLET FEVER	{ Under 5 years 5 & upwards			1	1	1	1	1				2	1	6 5
	WHOOPING COUGH	{ Under 5 years 5 & upwards		1	1	1 1					1	1	1	1	8
	DIPHTHERIA	{ Under 5 years 5 & upwards	1		1	1		1 2				1	1	2	7 9
	ENTERIC FEVER	{ Under 5 years 5 & upwards	1				1		1						2
	DIARRHOEAL DISEASES	{ Under 5 years 5 & upwards		1	2		1 1	1 2	2 2 2 1	1 4 13 13	4 5 2 4 1 3	1 1 1 1	1 1	1	66 7
	PHTHISIS	{ Under 5 years 5 & upwards		1	1 2 4	1 2 1 1	1 1 1	1 1 1	2 1 2	1 1 1	1 1 1	1 2 1	2 1	1 1 2 1	37
	RESPIRATORY DISEASES	{ Under 5 years 5 & upwards	3 1 1	2 1 1 1	2 1 1 1	1 3 1 1	1 1 1 2	1 1 2 3 2 2 1	1 1 1 1 1	1 1 1 1	1 2 2 2 1 2	2 1 1 1	2 1 1 1	2 2 4	43 84

TABLE No. 6.—Quarterly Births and Deaths during 1906.

QUARTERS.		East Sub-District, 40,597.					West Sub-District, 60,903.					Borough, 100,867.				
		1st	2nd	3rd	4th	Year	1st	2nd	3rd	4th	Year	1st	2nd	3rd	4th	Year
BIRTHS.	Males	166	164	150	145	625	196	176	195	188	755	362	340	345	333	1380
	Females	146	165	138	151	600	192	208	201	180	781	338	373	339	331	1381
	Total	312	329	288	296	1225	388	384	396	368	1536	700	713	684	664	2761
	Rate	30·8	32·5	28·5	29·3	30·3	25·6	25·3	26·1	24·3	25·3	27·9	28·4	27·2	26·4	27·5
	Males	115	93	89	81	378	95	80	91	93	359	210	173	180	174	737
	Females	116	59	98	75	348	104	81	106	110	401	220	140	204	185	749
	Total	231	152	187	156	726	199	161	197	203	760	430	313	384	359	1486
	Rate	22·8	15·0	18·5	15·4	17·9	13·1	10·6	13·0	13·4	12·5	17·1	12·5	15·3	14·3	14·8
	65 years and upwards	46	19	33	41	139	66	53	34	53	206	112	72	67	94	345
	Under 1 year	61	47	61	35	204	31	26	76	49	182	92	73	137	84	386
DEATHS.	1—5 years	39	24	28	9	100	24	15	17	26	82	63	39	45	35	182
	Zymotics (7)	33	13	61	24	131	14	14	42	25	95	47	27	103	49	226
	Rate	3·3	1·3	6·0	2·4	3·2	0·9	0·9	2·8	1·6	1·6	1·9	1·1	4·1	1·9	2·3
	Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	21	2	1	...	24	3	1	...	...	4	...	3	1	...	28
	Scarlet Fever	3	...	1	2	6	2	4	1	4	11	5	4	2	6	17
	Whooping Cough	5	5	2	...	12	3	1	1	3	8	8	6	3	3	20
	Diphtheria	1	1	2	3	7	4	4	...	8	16	5	5	2	11	23
	Enteric Fever	1	1	2	2	6	1	1	...	...	2	2	2	2	2	8
	Diarrhoea	2	4	53	17	76	1	3	40	...	54	3	7	93	27	130
	Influenza	1	1	3	6	11	7	1	...	7	15	8	2	3	13	26
	Phthisis	9	14	9	11	43	8	8	11	10	37	17	22	20	21	80
	Respiratory Diseases	52	36	21	17	126	46	31	21	29	127	98	67	42	46	253
	Uncertified	2	1	...	1	4	1	1	...	...	2	3	2	...	1	6
	Inquests	15	12	17	15	59	25	12	6	19	62	40	24	23	34	121
	Deaths in Public Institutions	{ General Hospital Borough Infectious Hospital Other Institutions Non-residents in the Borough (excluded from our Tables) Borough Residents dying outside (included in our Tables) ...					...	...	...	...	...	50	46	52	54	202
							...	...	...	...	...	5	2	2	4	13
							...	...	...	...	...	5	5	3	3	16
							...	...	...	...	...	24	33	33	33	123
							...	...	...	...	...	39	36	35	40	150

TABLE No. 7.

DEATHS in the Sub-Districts during 1906, classified according to Ages and Diseases.

No.	DISEASES.	EAST SUB-DISTRICT.								WEST SUB-DISTRICT.							
		AGES.							All Ages	AGES.							All Ages.
		0—	1—	5—	15—	25—	65—	75—		0—	1—	5—	15—	25—	65—	75—	
	ALL CAUSES.	204	100	24	13	246	84	55	726	182	82	39	19	232	112	94	760
2	Measles ..	6	18	..	..	..	..	..	24	1	3	..	..	..	..	..	4
3	Scarlet Fever ..	..	4	2	..	..	..	..	6	..	6	5	..	..	..	..	11
5	Epidemic Influenza ..	..	1	..	..	5	3	2	11	..	1	..	1	6	6	1	15
6	Whooping Cough ..	7	4	1	..	..	..	..	12	2	6	..	..	..	..	..	8
7	Diphtheria ..	1	5	1	..	..	..	..	7	..	7	9	..	..	..	..	16
8	Enteric Fever ..	..	1	1	..	4	..	..	6	..	..	..	..	1	1	..	2
10	Diarrhœa, Dysentery ..	13	3	..	..	..	..	1	17	7	3	..	..	..	1	1	12
11	Epidemic Enteritis ..	43	15	..	..	..	1	..	59	33	7	1	..	1	..	..	42
12	Parotitis ..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..
18	Syphilis ..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	1
21	Erysipelas ..	..	..	..	..	2	..	..	2	..	..	..	..	3	1	..	4
22	Puerperal Fever ..	..	..	..	..	1	..	..	1	..	..	..	2	2	..	..	4
23	Pyæmia ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
24	Infective Endocarditis ..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1
27	Rheumatic Fever ..	..	..	2	..	1	..	..	3	..	..	..	1	1	..	..	2
29	Tuberculosis of Brain ..	3	3	1	..	..	..	..	7	1	2	1	..	..	..	..	4
31	Phthisis ..	..	..	3	1	39	..	..	43	..	..	3	3	31	..	..	37
32	Abdominal Tuberculosis ..	3	4	2	..	1	..	..	10	3	4	2	..	..	..	..	9
34	Other forms Tuberculosis ..	1	3	1	1	4	..	..	10	2	3	1	1	..	..	..	7
40	Improper Feeding ..	1	..	..	..	1	..	..	2	1	..	..	..	..	..	..	1
41	Acute Alcoholism ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
42	Chronic Alcoholism ..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..
45	Osteo-arthritis ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
47	Cancer ..	..	..	..	..	25	8	2	35	..	..	..	..	30	11	6	47
48	Diabetes Mellitus ..	..	..	..	1	1	1	..	3	..	..	..	..	4	..	..	4
49	Purpura Hæmorrhagica ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
51	Anæmia ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
53	Premature Birth ..	31	..	..	..	..	..	..	31	27	..	..	..	..	..	..	27
54	Injury at Birth ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
55	Debility at Birth ..	19	..	..	..	..	..	..	19	32	..	..	..	..	..	..	32
56	Atelectasis ..	1	..	..	..	..	..	..	1	2	..	..	..	..	..	..	2
57	Congenital Defects ..	3	..	..	..	..	..	..	3	1	2	..	..	..	..	..	3
59	Atrophy, Debility, Marasmus ..	5	1	..	..	..	..	..	6	6	1	..	..	1	..	..	8
60	Dentition ..	..	1	..	..	..	..	..	1	2	2	..	..	..	..	..	4
61	Rickets ..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	1
62	Old Age, Senile Decay ..	..	..	..	..	4	30	33	67	..	..	..	..	2	20	65	87
63	Convulsions ..	8	1	..	..	..	..	..	9	5	3	..	..	..	..	..	8
64	Meningitis ..	4	..	..	..	2	..	..	6	3	1	..	1	..	..	..	8
65	Encephalitis ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
66	Apoplexy ..	..	..	..	..	6	2	..	8	..	..	..	..	5	6	4	15
67	Softening of Brain ..	..	..	..	..	2	..	..	2	..	..	..	..	..	1	..	1
68	Hemiplegia ..	..	..	..	..	2	1	1	4	..	..	..	..	1	1	1	3
70	Insanity ..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..
73	Epilepsy ..	..	..	..	..	1	..	..	1	..	..	..	..	3	..	..	3
76	Paraplegia ..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
77	Other Forms, Nervous Diseases ..	..	..	..	1	4	2	..	7	..	..	..	..	5	4	1	10
78	Otitis ..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2
82	Endocarditis ..	..	..	..	2	21	5	1	29	..	1	4	2	26	10	..	43
85	Aneurism ..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1
86	Senile Gangrene ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
87	Embolism, Thrombosis ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1

TABLE No. 7 (continued).

No.	DISEASES.	EAST SUB-DISTRICT.								WEST SUB-DISTRICT.							
		AGES.							All Ages.	AGES.							All Ages.
		0—	1—	5—	15—	25—	65—	75—		0—	1—	5—	15—	25—	65—	75—	
90	Cardiac Failure ..	..	..	..	1	6	1	2	10	..	..	..	..	2	8	1	11
	Cerebral Hæmorrhage ..	..	..	..	..	6	3	1	10	..	..	..	..	7	5	1	13
91	Laryngitis ..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
94)	Bronchitis ..	14	5	..	1	27	12	6	65	16	7	..	..	26	20	8	77
95)																	
98	Pneumonia ..	10	20	2	2	18	3	..	55	8	10	1	1	10	8	1	39
99	Emphysema, Asthma ..	..	..	..	..	2	..	..	2	..	..	..	1	1	..	..	2
100	Pleurisy ..	..	..	..	..	2	..	..	2	..	..	..	..	2	..	..	2
101	Other Diseases, Respiratory System	..	1	..	..	1	..	..	2	1	..	..	..	3	..	1	5
103	Diseases of Pharynx ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
105	Ulcer of Stomach and Duodenum ..	..	..	..	..	1	..	..	1	..	..	..	1	3	1	..	5
106	Other Diseases of Stomach ..	5	..	..	..	5	..	..	10	2	..	..	..	1	..	..	3
107	Enteritis ..	16	4	1	..	3	1	..	25	13	2	..	..	2	1	..	18
108	Appendicitis ..	..	..	2	..	..	..	..	2	..	..	5	1	2	..	..	8
109	Obstruction of Intestine ..	..	..	..	1	1	2	..	4	..	..	..	..	..	..	..	..
110	Other Diseases of Intestine ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
111	Cirrhosis of Liver ..	..	..	..	..	12	..	..	12	..	..	..	..	10	..	..	10
112	Other Diseases of Liver ..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	3
113	Peritonitis ..	1	..	..	..	2	..	..	3	1	..	..	..	1	..	..	2
115	Diseases of Lymphatic System and Glands	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
	Graves's Disease ..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..
116	Nephritis ..	..	..	2	1	7	2	..	12	..	..	..	..	15	2	1	18
118	Calculus ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
119	Diseases of Bladder and Prostate ..	..	..	..	..	..	1	2	3	..	..	..	..	3	1	..	4
121	Diseases of Testis and Penis ..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
122	Diseases of Ovaries ..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
123	Diseases of Uterus & Appendages ..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1
126	Abortion, Miscarriage ..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1
128	Puerperal Convulsions ..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
129	Flooding ..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1
131	Other Diseases, Pregnancy and Childbirth	..	..	..	..	1	..	..	1	..	..	..	1	1	..	..	2
132	Arthritis, Ostitis, Periostitis ..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1
137	Diseases, Integumentary System ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
	<i>Accidents and Negligence.</i>																
139	In Vehicular Traffic ..	..	1	1	..	1	..	..	3	..	..	1	..	..	..	..	1
145	Burns and Scalds ..	..	4	..	..	1	1	..	6	..	3	..	..	..	1	1	5
150	Drowning ..	..	..	..	..	..	..	1	1	..	..	..	..	3	1	..	4
	Suffocation, Overlaid in Bed ..	6	..	..	..	..	..	..	6	4	1	..	..	..	..	..	5
152	„ Otherwise ..	1	..	1	..	1	..	..	3	..	..	..	..	..	..	..	..
153	Falls not specified ..	..	..	..	..	..	1	1	2	..	1	..	1	2	..	1	5
155	Otherwise ..	..	..	..	..	1	1	..	2	..	..	..	..	..	..	..	..
156	Homicide ..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	1
	<i>Suicides.</i>																
157	By Poison ..	..	..	..	..	3	..	..	3	..	..	..	..	..	..	..	..
160	By Drowning ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
162	By Cut or Stab ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
165	By other and unspecified methods ..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	1
168	Ill defined and unspecified causes ..	1	..	..	..	1	1	..	3	2	2	..	..	3	1	..	8



TABLE No. 7a. (Being Table V., L.G.B.)

INFANTILE MORTALITY during the Year 1906

Deaths from stated causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.				EAST SUB-DISTRICT.																	WEST SUB-DISTRICT.																
				Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under One Year.	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under One Year.
ALL CAUSES	Certified	31	8	12	6	61	17	13	18	14	22	13	11	9	6	15	5	200	33	9	11	7	60	20	16	13	17	10	12	10	9	5	7	3	182	
	Uncertified ..	..	4	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	4	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
COMMON INFECTIOUS DISEASES.	Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles ..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	1	1	1	6	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
	Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria : Croup	1	1	
DIARRHOEAL DISEASES.	Whooping Cough ..	..	..	..	1	1	..	..	..	2	2	..	1	..	1	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
	Diarrhoea, all forms ..	..	..	2	1	3	1	5	6	6	6	1	1	3	1	4	2	39	..	2	..	2	..	1	3	9	1	2	1	2	..	1	..	..	22
	Enteritis (<i>not Tuberculous</i>) ..	..	1	1	1	3	2	2	5	4	5	4	4	..	1	3	..	33	..	1	..	1	1	6	3	5	5	2	5	1	1	..	..	..	30
	Gastritis, Gastro-intestinal Catarrh ..	..	..	..	..	..	1	..	..	1	..	1	..	1	1	..	..	5	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	3	
WASTING DISEASES.	Premature Birth ..	..	18	5	3	28	3	..	..	..	..	..	..	..	..	..	..	31	15	4	3	1	23	4	..	..	..	..	..	..	..	..	..	..	27
	Congenital Defects ..	..	2	..	1	3	..	..	..	..	..	..	..	..	..	..	..	3	2	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
	Injury at Birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
	Want of Breast-milk ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus ..	11	..	3	..	14	4	2	2	..	2	1	1	..	..	..	..	26	13	4	4	4	25	5	4	..	..	1	1	..	..	..	..	..	36
TUBERCULOUS DISEASES.	Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	3	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	
	Tuberculous Peritonitis : } Tabes Mesenterica }	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	..	3	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	3	
	Other Tuberculous Diseases ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2	
Other causes	Erysipelas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
	Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1
	Rickets ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
	Meningitis (<i>not Tuberculous</i>) ..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	1	..	4	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	..	3
	Convulsions ..	..	1	1	2	..	4	..	..	1	..	1	1	1	1	..	..	8	..	..	1	1	..	1	..	1	..	..	1	1	..	1	..	..	5
	Bronchitis ..	..	..	..	..	..	2	2	1	..	1	3	1	1	1	2	..	14	..	1	1	2	5	1	1	1	..	2	3	..	1	..	..	16	
	Laryngitis ..	..	..	..	..	..	..	1	..	1	1	2	2	..	..	3	..	10	..	..	..	..	..	..	1	2	1	..	..	..	1	2	1	..	8
	Pneumonia ..	..	2	1	..	1	4	1	..	1	..	..	..	..	..	..	..	6	..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	4
	Suffocation, overlying ..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	..	..	4	2	..	1	..	3	2	1	2	..	..	4	..	..	2	..	..	14
	Other Causes	
Total Births ..				1225																	1536																
Total Deaths at all ages ..				726																	760																
Estimated Population ..				40,597																	60,903																

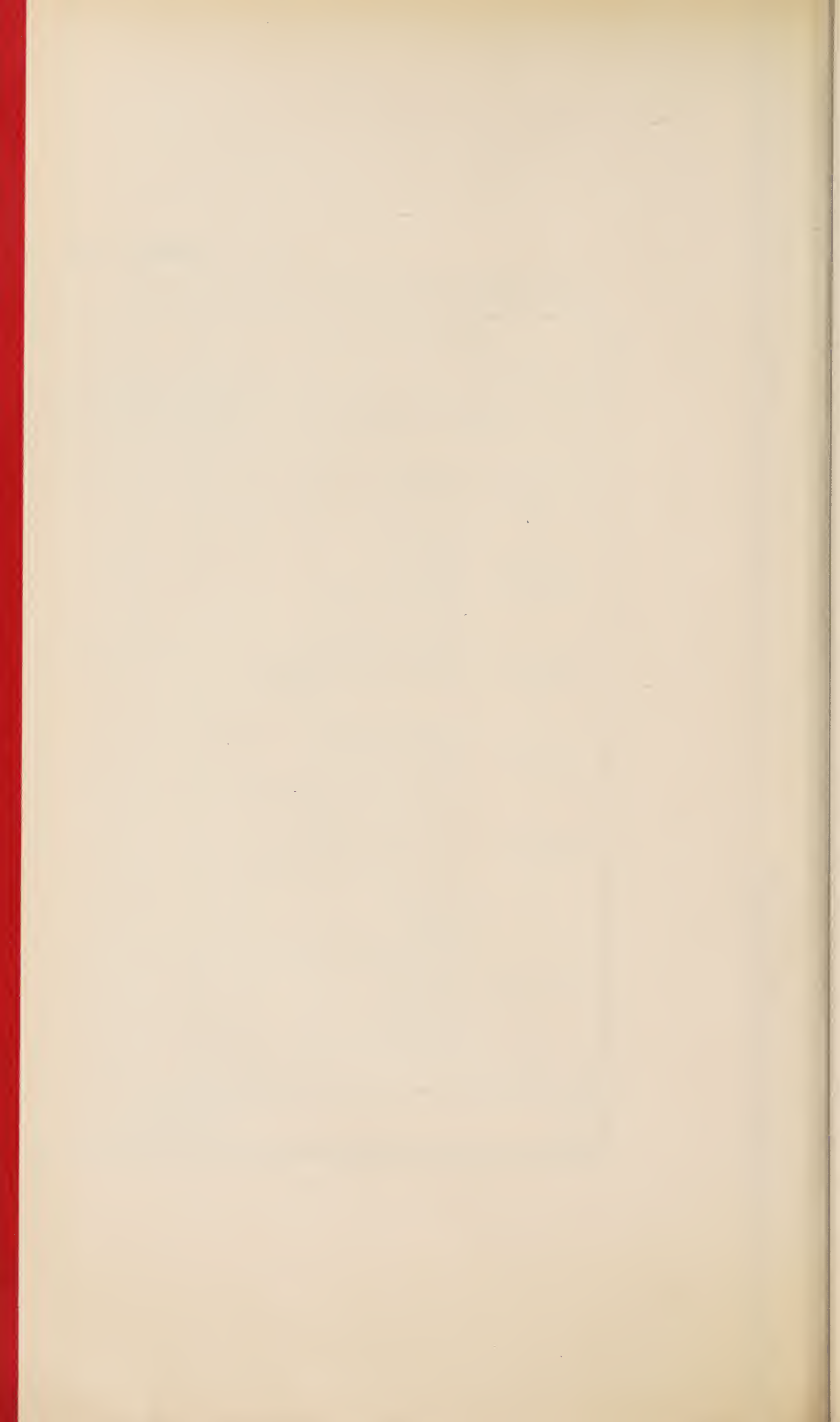


TABLE No. 8.—Eleven Years' Annual Deaths, &c.

	* 1896	1897	1898	1899	1900	1901	* 1902	1903	1904	1905	1906	A
Small Pox ...	...	...	...	...	1	...	...	1	...	...	...	0.2
Measles ...	8	49	19	2	76	48	21	56	...	45	28	32.4
Scarlet Fever ...	21	24	20	6	9	10	15	14	...	15	17	14.8
Whooping Cough ...	28	39	9	21	70	29	25	7	60	12	20	30.0
Diphtheria ...	55,	58	43	21	10	13	18	10	18	18	23	26.4
Enteric Fever ...	37	21	20	44	39	17	15	16	12	10	8	23.1
Diarrhoea ...	131	188	174	132	117	109	72	86	161	126	130	129.6
Seven Zymotics ...	312	402	330	293	389	282	166	190	265	226	226	285.5
Rate per 1,000 ...	3.5	4.5	3.6	3.2	4.2	3.0	1.7	2.0	2.7	2.3	2.3	3.07
Phthisis ...	89	103	105	111	110	98	102	86	88	87	80	97.9
Respiratory ...	361	324	319	374	444	248	334	285	240	258	253	318.7
65 years and upwards ...	309	285	315	367	383	302	344	314	287	326	345	323.2
Under 1 year ...	561	671	634	575	622	487	420	414	446	389	386	521.9
1—5 years ...	220	308	232	209	301	193	199	185	195	182	182	222.4

* These years contain 53 weeks.

A—Annual Averages for the ten years preceding 1905.



TABLE No. 9. (being Table I, L.G.B.)
Vital Statistics during 1905 and 25 previous years.

YEAR.	Popula- tion estimated to middle of each year.	BIRTHS.		DEATHS BELONGING TO THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT.	Deaths of Non- residents registered in Public Institu- tions in the District.	Deaths of Residents occurring outside the District.	TOTAL DEATHS REGISTERED.	
		Number	Rate.	Under 1 year of age.		At all Ages.					Number	Rate.
				Number	Rate per 1,000 Births regist'd	Number	Rate.					
1	2	3	4	5	6	12	13	9	10	11	7	8
*1881	75,932	2769	35·9	410	148	1552	20·1	272	96	...	1648	21·3
1882	76,596	2762	36·1	433	156	1634	21·4	266	79	...	1713	22·4
1883	77,266	2804	36·4	419	149	1542	20·0	329	101	...	1643	21·3
1884	77,942	2691	34·6	509	189	1734	22·3	287	123	...	1857	23·9
*1885	78,624	2806	35·1	390	138	1564	19·5	322	106	...	1670	20·9
1886	79,311	2803	35 4	490	174	1701	21·5	301	121	...	1822	23·0
1887	80,005	2675	33·5	469	175	1664	20·8	329	128	...	1792	22 4
1888	80,705	2674	33·2	445	166	1595	19·8	295	117	...	1712	21·2
1889	81,411	2666	32·8	479	179	1620	19·9	291	119	...	1739	21·4
*1890	82,124	2735	32·8	477	174	1772	21·2	364	136	...	1908	22·8
1891	82,932	2820	34·1	531	188	1914	23·1	351	122	...	2036	24·6
1892	84,022	2805	33·5	482	171	1716	20·5	308	125	...	1841	22·0
1893	85,126	2902	34·2	600	206	1853	21·8	398	137	...	1990	23·4
1894	86,244	2889	33·6	484	167	1719	20·0	392	124	...	1843	21·4
1895	87,377	3027	34·7	659	217	2069	23·7	404	138	...	2207	25·3
*1896	88,525	3023	33·6	561	185	1740	19·3	329	121	...	1861	20·7
1897	89,688	3054	34·2	671	219	1900	21·2	371	127	...	2027	22·7
1898	90,866	3140	34·7	634	202	1845	20·4	373	145	...	1990	22·0
1899	92,060	3113	33·9	575	184	1908	20·8	420	138	...	2044	22·3
1900	93,270	2997	32·2	622	207	1993	21·4	448	188	...	2181	23·5
1901	94,495	3000	31·9	487	162	1577	16·7	356	132	...	1709	18·1
*1902	95,736	3073	31·6	420	137	1575	16·2	392	148	...	1723	17·7
1903	96,994	2943	30·4	414	141	1465	15·2	382	168	...	1633	16·9
1904	98,268	2924	29·8	446	152	1426	14·6	206	103	60	1469	15·0
1905	99,559	2851	28·7	389	136	1468	14·8	221	108	128	1448	14·6
Averages for years 1896-1905	93,946	3012	32·1	522	173	1690	18·1	350	138	..	1809	19·4
1906	100,867	2761	27 5	386	140	1486	14·8	231	123	150	1459	14·5

* These years contain 53 weeks. Area of District in Acres, 3,525.

CENSUS, 1901.	Total Population at all ages	..	..	..	..	..	94,187.
	Number of Inhabited Houses	..	..	..	..	..	19,285.
	Average number of persons per house	..	..	..	..	..	4·9

Institutions within the Borough receiving sick and infirm persons from without the Borough—The Wolverhampton and Staffordshire General Hospital; The Wolverhampton Borough Hospital; the Wolverhampton Eye Infirmary; the Wolverhampton and District Hospital for Women; the Victoria Nursing Institution.

TABLE No. 10.
(Which includes Table II., L.G.B.)

EAST SUB-DISTRICT.								WEST SUB-DISTRICT.							
YEAR.	Population estimated to middle of each year.	BIRTHS.		DEATHS.				Population estimated to middle of each year.	BIRTHS.		DEATHS.				
		Number.	Rate.	At all ages.		Under 1 year of age			Number.	Rate.	At all ages.		Under 1 year of age		
				Number.	Rate.	Number.	Rate per 1,000 Births regist'd				Number.	Rate.	Number.	Rate per 1,000 Births regist'd	
	<i>a</i>	<i>b</i>		<i>c</i>		<i>d</i>		<i>a</i>	<i>b</i>		<i>c</i>		<i>d</i>		
1884	38,748	1382	35·8	981	25·4	275	199	39,146	1309	33·5	753	19·3	231	176	
*1885	38,791	1451	36·8	844	21·4	210	145	39,779	1355	33·5	720	17·8	178	131	
1886	38,834	1464	37·8	955	24·6	271	185	40,423	1339	33·2	746	18·5	218	163	
1887	38,876	1399	36·1	944	24·3	294	210	41,077	1276	31·2	720	17·5	174	136	
1888	38,919	1408	36·3	827	21·3	254	180	41,741	1266	30·4	768	18·5	118	149	
1889	38,962	1417	36·5	883	22·7	270	190	42,417	1249	29·5	737	17·4	209	167	
*1890	39,005	1403	35·4	977	24·6	270	192	43,103	1332	30·4	795	18·1	207	155	
1891	39,067	1507	38·7	1026	26·3	310	206	43,856	1313	30·0	888	20·3	220	168	
1892	39,190	1493	38·2	935	23·9	273	183	44,794	1312	29·4	781	17·5	209	159	
1893	39,312	1497	38·2	1040	26·5	360	240	45,752	1405	30·8	813	17·8	240	171	
1894	39,435	1487	37·8	975	24·8	276	186	46,730	1402	30·1	744	16·0	208	148	
1895	39,559	1505	38·2	1106	28·0	333	254	47,729	1522	32·0	963	20·2	276	181	
*1896	39,683	1595	39·6	899	22·3	310	194	48,750	1428	28·8	841	17·0	251	176	
1897	39,807	1543	38·9	1022	25·7	363	235	49,792	1511	30·4	871	17·7	308	204	
1898	39,931	1561	39·2	951	23·9	354	227	50,856	1579	31·2	894	17·6	280	177	
1899	40,057	1508	37·8	1030	25·8	310	206	51,944	1605	31·0	878	16·9	265	165	
1900	40,182	1404	35·1	1030	25·7	318	226	53,054	1593	30·1	963	18·2	304	191	
1901	40,307	1408	35·5	800	19·9	271	192	54,188	1592	29·5	777	14·4	216	136	
*1902	40,434	1434	34·9	818	19·9	235	164	55,347	1639	29·2	757	13·5	185	113	
1903	40,654	1337	33·0	722	17·8	220	165	56,550	1606	28·5	743	13·2	194	121	
1904	40,635	1283	31·7	699	17·3	230	179	57,965	1641	28·4	727	12·6	216	132	
1905	40,616	1290	31·9	655	16·2	206	159	59,416	1561	26·4	813	13·7	183	117	
Averages for years 1896-1905	40,231	1436	35·8	863	21·5	282	195	53,786	1576	29·4	826	15·5	240	154	
1906	40,597	1225	30·3	726	17·9	204	166	60,903	1536	25·3	760	12·5	182	118	
CENSUS, 1901	Population 40,696							.. .. . 53,491						
	Number of Inhabited Houses 7,984							.. .. . 11,293						
	Number of Persons per house 5·1							.. .. . 4·7						

At the beginning of 1903 the dividing line between the Sub-Districts was altered; the alteration affects the 1901 census by transferring 418 from the West population to the East, and so far vitiates the comparison with previous years. Another result is that until the next census the estimated East population will be a diminishing one.

* These years contain 53 weeks.

TABLE No. II.

Birth Rates and various Death Rates in 33 of the large English Towns for 52 weeks ending 29th December, 1906.
Compiled from the Registrar-General's Returns.

Name of Town.	Population.	Birth-rate.	Death-rate. Cor'ect'd	DEATH-RATES FROM							Deaths under one year per 1,000 births.
				Small-pox.	Measles.	Scarlet Fever.	Diph- theria.	Whoop- ing Cough.	Fever.	Diarrh- oea.	
LONDON	4,721,217	26.5	15.88	—	0.41	0.11	0.15	0.26	0.06	0.94	131
CROYDON	151,011	25.7	13.71	—	0.26	0.05	0.27	0.19	0.03	0.96	127
WEST HAM	301,617	30.6	16.79	—	0.43	0.13	0.29	0.26	0.18	1.88	150
BRIGHTON	128,095	22.3	14.49	—	0.22	0.02	0.09	0.19	0.02	0.55	111
PORISMOOTH	205,118	28.7	15.31	—	0.04	0.01	0.29	0.31	0.08	1.11	130
NORWICH	117,958	26.2	16.92	—	0.84	0.08	0.25	0.17	0.10	1.55	172
PLYMOUTH	118,014	24.0	15.83	0.02	0.44	0.08	0.18	0.47	0.05	0.72	152
BRISTOL.	363,223	25.9	14.85	0.00	0.39	0.08	0.21	0.28	0.06	0.51	127
WOLVERHAMPTON	100,867	27.5	15.31	—	0.27	0.17	0.23	0.20	0.08	1.29	140
BIRMINGHAM	548,022	29.4	18.06	—	0.40	0.10	0.18	0.45	0.07	1.58	168
LEICESTER	232,111	25.2	15.24	—	0.35	0.22	0.13	0.49	0.06	1.13	168
NOTTINGHAM	254,563	26.6	16.95	—	0.02	0.07	0.16	0.16	0.17	1.52	171
DERBY	123,981	25.1	15.34	—	0.02	0.03	0.50	0.23	0.09	0.53	115
BIRKENHEAD	117,292	31.9	18.41	—	0.08	0.26	0.23	0.50	0.15	1.75	151
LIVERPOOL	739,180	32.7	22.09	0.00	0.78	0.25	0.20	0.48	0.12	1.79	172
BOLTON	180,502	25.4	17.15	—	0.01	0.09	0.12	0.11	0.24	1.15	140
MANCHESTER	637,126	29.3	21.37	—	0.75	0.18	0.19	0.31	0.13	1.53	167
SALFORD	234,077	30.2	20.16	—	0.80	0.19	0.39	0.23	0.18	1.44	152
OLDHAM	140,969	26.9	21.08	—	0.88	0.23	0.12	0.29	0.04	1.19	146
BURNLEY	102,808	27.8	22.04	—	1.15	0.12	0.14	0.28	0.12	2.01	212
BLACKBURN	134,015	25.3	18.13	—	0.51	0.26	0.19	0.10	0.10	1.07	156
PRESTON	116,399	28.7	20.98	—	1.08	0.13	0.14	0.10	0.17	1.96	199
HUDDERSFIELD	94,851	24.3	18.58	—	0.64	0.07	0.14	0.35	0.11	0.90	135
HALIFAX	109,272	18.9	16.18	—	0.50	0.07	0.39	0.06	0.04	0.30	115
BRADFORD	288,544	20.6	17.82	—	0.44	0.14	0.21	0.13	0.18	0.93	152
LEEDS...	463,495	26.2	17.04	—	0.59	0.07	0.18	0.32	0.10	0.97	151
SHEFFIELD	447,951	29.9	17.70	—	0.17	0.49	0.19	0.24	0.12	1.71	158
HULL ...	262,426	29.8	17.35	0.04	0.24	0.05	0.52	0.28	0.19	1.61	160
SUNDERLAND	154,385	34.9	19.15	—	0.10	0.04	0.22	0.39	0.14	1.08	140
GATESHEAD	123,191	31.9	17.20	—	0.41	0.06	0.28	0.33	0.08	1.62	161
NEWCASTLE	268,721	30.6	18.47	—	0.63	0.06	0.24	0.22	0.05	1.03	151
CARDIFF	183,823	27.3	15.24	—	0.01	0.02	0.07	0.35	0.07	0.79	138
SWANSEA	96,848	33.0	19.63	—	0.30	0.09	0.07	0.52	0.10	0.82	157

